

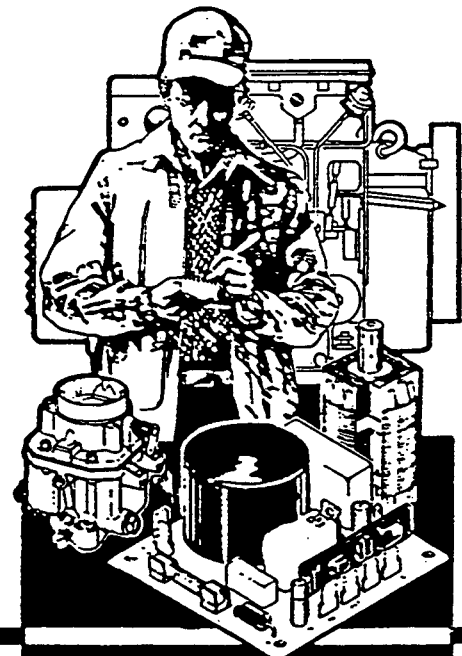
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Onan

Parts Manual

MDJC

Marine GenSet



Onan Service Parts

968-0222
6-87 (Spec A-AD)
Replaces
7-84 (Spec A-AD)
Printed in U.S.A.

General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.

The diagram shows a rectangular nameplate with two circular mounting holes at the top. The Onan logo is prominently displayed in the upper left. Below the logo is a large rectangular box labeled "MODEL AND SPEC NO.". Further down is another rectangular box labeled "SERIAL NO.". The bottom right corner of the nameplate is shown peeling away, revealing a second identical nameplate underneath.

M-1149

For handy reference, insert "YOUR" nameplate information in the spaces above.

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Introduction

This Parts Manual applies to the Standard Sets Listed below. The illustrations are arranged in groups of related items, and each part or assembly is identified by a Reference Number. All parts illustrated are typical, and unless otherwise mentioned in the description column the parts are interchangeable between models.

These typical illustrations are subject to change and reflect only the latest replacement parts arrangement. The Right and Left sides of the Unit are determined by FACING the FRONT (Engine End) of the Set.

Set Data Table

MODEL IDENTIFICATION	RATING	RPM	RATING	BATTERY	VOLTAGE
10.0 MDJC- */ # @	10,000 WATTS	1500	RPM	12	VDC
10.0 MDJC-*3/ # @	10,000 WATTS	1500	RPM	24	VDC
10.0 MDJC-*4/ # @	10,000 WATTS	1500	RPM	32	VDC
12.0 MDJC- */ # @	12,000 WATTS	1800/1500	RPM	12	VDC
12.0 MDJC-*3/ # @	12,000 WATTS	1800/1500	RPM	24	VDC
12.0 MDJC-*4/ # @	12,000 WATTS	1800/1500	RPM	32	VDC
15.0 MDJC- */ # @	15,000 WATTS	1800	RPM	12	VDC
15.0 MDJC-*3/ # @	15,000 WATTS	1800	RPM	24	VDC
15.0 MDJC-*4/ # @	15,000 WATTS	1800	RPM	32	VDC

Electrical Data Table

*VOLTAGE CODE	VOLTS	HERTZ	WIRE	PHASE	NOTES
1XR	120	60	3	3	
3CE	120/240	60	3	1	¢
3CR	120/240	60	4	1 or 3	+
3E	120/240	60	3	1	¢
4R	120/208	60	3	3	
5DR	120/240	60	3	3	
8R	120/220	60	3	3	
18R	+	60	12	1 or 3	+
53CE	120/240	50	3	1	¢
53CR	120/240	50	4	1 or 3	
53E	120/240	50	3	1	¢
54R	120/208	50	3	3	
55DR	120/240	50	3	3	
518R	+	50	12	1 or 3	+

* - Voltage Codes follow Model Letter designations.

- Specification Number: Number 1 is Standard, all others indicate variations.

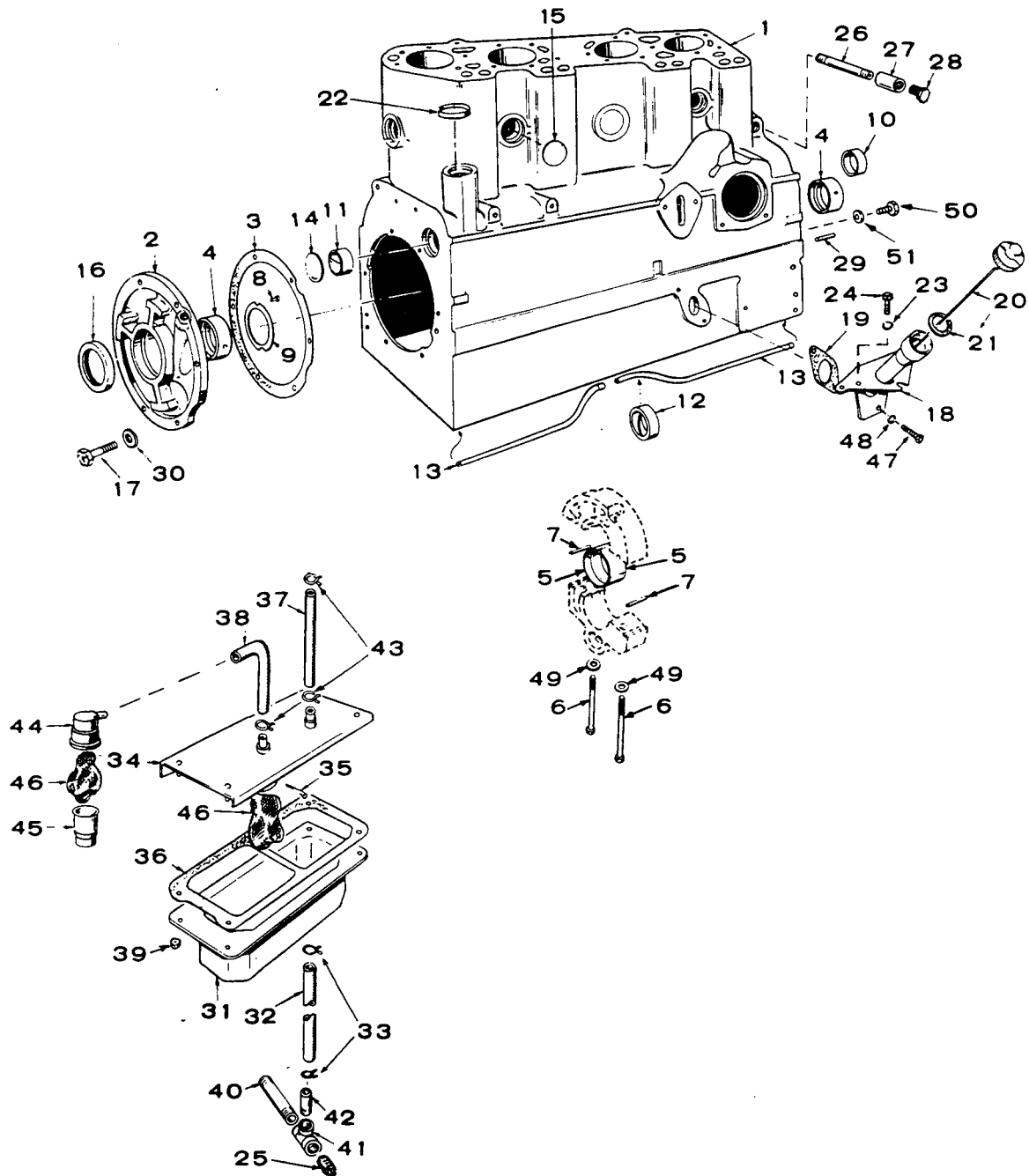
@ - Specification Letter: Letter advances (A to B, B to C, etc) with Major Manufacturing Changes.

+ - The Stators are Reconnectible.

¢ - These are Workboat Models. When special parts are used, the illustration title will indicate "Workboat Models". Example: 10.0MDJC-3CE/3838Z.

Note: The Number 3 or 4 in Voltage Codes indicate applicable Starting Volts DC. The number designations used on Spec A Thru Z Sets only.

Cylinder Block



CS-1042-1

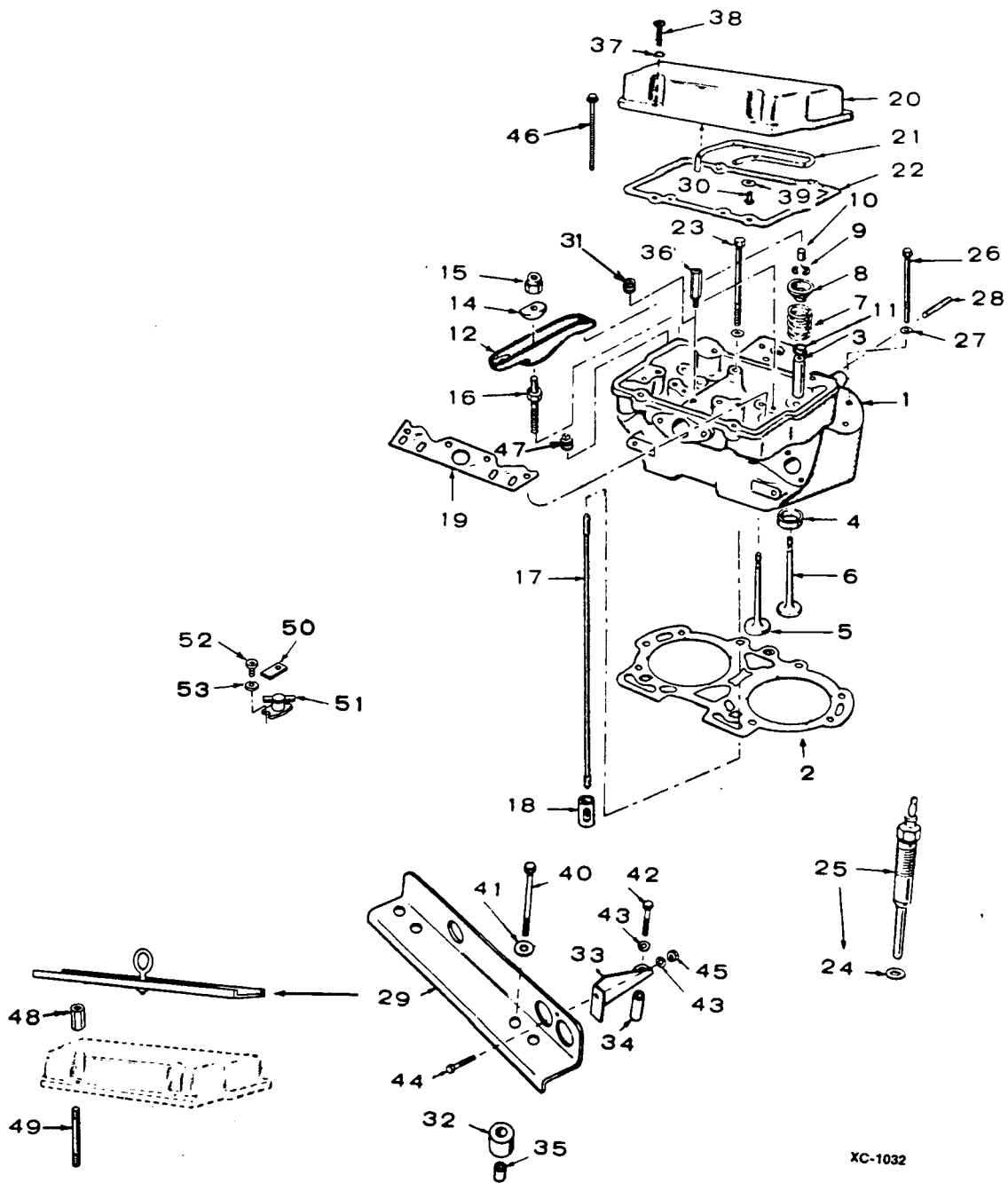
Cylinder Block

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	110-3216	1	Block Assembly, Cylinder (Includes Tappets and Parts Marked*)
2	101-0337	1	*Plate, Rear Bearing
3	101-0386	1	*Gasket and Shim Kit, Rear Bearing Plate - Includes Bearing Plate Mounting Washers
4	BEARING, MAIN - FRONT AND REAR		
	101-0359	2	*Standard
	101-0359-02	2	.002" Undersize
	101-0359-10	2	.010" Undersize
	101-0359-20	2	.020" Undersize
	101-0359-30	2	.030" Undersize
5	BEARING HALF, MAIN - CENTER		
	101-0361	2	*Standard
	101-0361-02	2	.002" Undersize
	101-0361-10	2	.010" Undersize
	101-0361-20	2	.020" Undersize
	101-0361-30	2	.030" Undersize
6	101-0342	2	*Bolt, Center Bearing Housing
7	516-0149	2	Pin, Center Bearing Housing
8	516-0072	4	*Pin, Thrust Washer
9	104-0420	2	*Washer, Camshaft Thrust
10	101-0363	1	*Bearing, Camshaft - Front
11	101-0365	1	*Bearing, Camshaft - Rear
12	101-0364	1	*Bearing Camshaft - Center
13	*TUBE, CRANKCASE OIL		
	120-0586	1	Front
	120-0585	1	Rear
14	517-0053	1	*Plug, Expansion - Rear Camshaft Opening
15	*PLUG, EXPANSION - CYLINDER BLOCK		
	517-0059	4	1-7/16"
	517-0096	2	1-9/16"
	517-0097	1	1-3/4"
16	509-0086	1	Seal, Crankshaft - Rear
17	805-0019	6	*Bolt, Rear Bearing Plate (Special)
18	TUBE, OIL FILL		
	123-0681	1	Spec A through R
	123-1086	1	Begin Spec S
19	123-0667	1	Gasket, Oil Fill
20	CAP AND INDICATOR		
	123-0698	1	Spec A through R
	123-1056	1	Begin Spec S
21	123-0191	1	Gasket, Cap
22	517-0103	1	*Plug, Core Hole - Begin Spec T
23	WASHER, LOCK - SPRING		
	850-0050	2	Spec A through R (3/8")
	850-0045	2	Begin Spec S (5/16")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
24	SCREW, CAP - HEX HEAD		
	800-0048	2	Spec A through R (3/8-16 x 3/4")
	800-0026	2	Begin Spec S (5/16-18 x 3/4")
25	505-0056	1	Plug, Pipe - Square Head (1/2") Spec A through S
26	505-0449	1	Nipple, Pipe (1/4" x 6") Water Drain
27	505-0027	1	Coupling, Pipe (1/4") Water Drain
28	502-0153	1	Plug, Pipe (Brass) 1/4" Hex Head - Water Drain
29	516-0141	2	*Pin, Gearcase Locating
30	526-0245	6	*Washer, Bearing Plate (Special)
31	123-1061	1	Damper, Breather Pulsation - Spec S
32	503-0564	1	Hose, Overflow - Spec S
33	503-0197	2	Clamp, Overflow Hose - Spec S
34	123-1045	1	Cover, Breather Pulsation Damper - Spec S
35	516-0177	1	Pin, Cotter - Spec S
36	123-1049	1	Gasket, Cover - Spec S
37	503-0563	1	Hose, Cover to Manifold - Spec S
38	HOSE, COVER TO BREATHER		
	503-0328	1	Spec A through R
	503-0562	1	Spec S
39	870-0240	4	Nut, Self-Locking (Washer Base) #10-32 - Spec S
40	505-0681	1	Nipple, Pipe (1/2" x 2-1/2") Spec S
41	505-0682	1	Tee, Pipe (1/2") Spec S
42	505-0674	1	Nipple, Half - Pipe (1/2" x 2-1/2") Spec S
43	503-0170	4	Clamp, Hose - Spec A through S
44	123-0787	1	Cap, Breather Tube - Spec A through S
45	123-0645	1	*Tube, Breather - Spec A through S
46	FILTER, BREATHER		
	123-0865	1	Spec A through R
	123-0865	2	Spec S
47	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")
48	850-0045	2	Washer, Lock - Spring (5/16")
49	526-0035	2	*Washer, Flat (17/32" ID x 7/8" OD x 1/8" Thk)
50	800-0047	2	#Screw, Cap - Hex Head (3/8-16 x 5/8") Begin Spec AC (Wet Hole)
51	526-0066	2	#Washer, Flat - Copper (25/64" ID x 9/16" OD x 1/16" Thk) Begin Spec AC (Wet Hole)

- * - Parts Included in 110-3216 Cylinder Block Assembly.
- # - See Optional Heat Exchanger Group Begin Spec AC and Keel Cooling Group for Other Related Wet Hole Hardware.

Cylinder Head



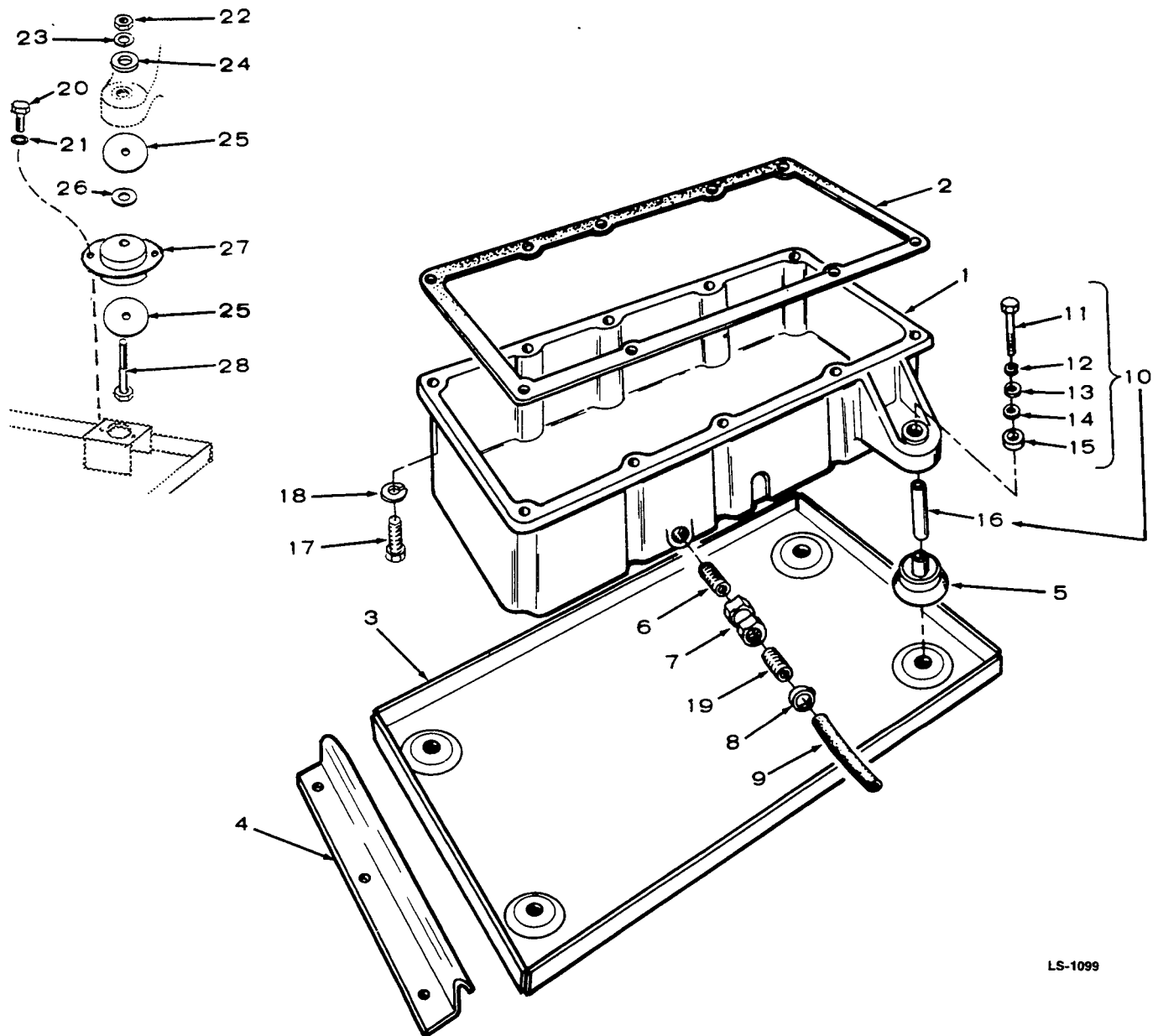
Cylinder Head

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	HEAD, CYLINDER		
	110-2986	2	With Valves Spec A Through N (Includes Cylinder Head Connector and Parts Marked #)
	110-2985	2	Begin Spec P (Includes Cylinder Head Connector and Parts Marked +)
			Without Valves (Includes Parts Marked *)
	110-2984	2	#Spec A Through N
	110-1855	2	+Begin Spec P
2	110-2944	2	Gasket, Head
3	GUIDE, VALVE		
	110-1501	8	*Standard
	110-1501-01	8	.001" Oversize
	110-1501-05	8	.005" Oversize
4	INSERT, VALVE SEAT		
	110-1268	8	*Standard
	110-1268-02	8	.002" Oversize
	110-1268-05	8	.005" Oversize
	110-1268-10	8	.010" Oversize
	110-1268-25	8	.025" Oversize
5	110-1871	4	#+Valve, Intake
6	110-1278	4	#+Valve, Exhaust
7	110-1221	8	#+Spring, Valve
8	110-1220	8	#+Retainer, Valve Spring
9	110-0858	16	#+Lock, Valve Spring Retainer
10	110-0859	8	Cap, Valve Stem
11	509-0132	4	#+Seal, Oil - Intake Valve
12	ARM, ROCKER		
	115-0128	4	Exhaust
	115-0129	4	Intake
14	115-0127	8	Ball, Rocker Arm
15	115-0150	8	Locknut, Rocker Arm
16	115-0152	8	#+Stud, Rocker Arm
17	115-0149	8	Rod, Valve Push
18	115-0195	8	‡Tappet, Valve
19	115-0196	2	*Guide, Push Rod
20	115-0134	2	Cover Assembly, Rocker (Includes Parts Marked ▷)
21	120-0628	2	▷Line, Oil - Rocker Cover
22	115-0130	2	Gasket, Rocker Cover
23	110-1264	10	Screw, Cylinder Head Mounting (Special)
24	110-0546	4	Gasket, Glow Plug
25	PLUG, GLOW (Includes Gasket)		
	333-0106	4	12 Volt DC
	333-0107	4	24 Volt DC
	333-0112	4	32 Volt DC
26	800-0501	12	Screw, Cylinder Head Mounting (Special)
27	526-0174	14	Washer, Flat (13/32" ID x 25/32" OD x 0.1345" Thk)
28	520-0608	8	#+Stud, Exhaust Manifold

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
29	BRACKET, LIFTING	1	Spec A (Not Available - Replace With Begin Spec B Bracket and Attaching Parts)
	403-0690	1	Begin Spec B
30	815-0562	2	▷Screw, Machine - Cross Recessed Pan Head (#10 x 5/16")
31	505-0274	2	*Plug, Pipe - Countersunk Hex Head (1/8") (Sets Without Standpipe)
32	402-0361	2	Cushion, Vibration
33	403-0890	1	Brace, Lifting Bracket - Begin Spec B
34	403-0826	1	Spacer, Lifting Bracket - Begin Spec B
35	402-0362	2	Bushing, Spacer
36	123-1140	2	*Standpipe - Begin Spec T
37	850-0045	8	Washer, Lock - Spring (5/16")
38	800-0030	7	Screw, Cap - Hex Head (5/16-18 x 1-1/4")
39	526-0130	1	▷Washer, Flat (17/64" ID x 1" OD x 1/16" Thk)
40	800-0094	2	Screw, Cap - Hex Head (1/2-13 x 2") Begin Spec B
41	526-0100	2	Washer, Flat - Unplated (9/16" ID x 1-3/8" OD x 7/64" Thk) Begin Spec B
42	800-0038	1	Screw, Cap - Hex Head (5/16-18 x 3/4") Begin Spec B
43	850-0045	2	Washer, Lock - Spring (5/16") Begin Spec B
44	800-0026	1	Screw, Cap - Hex Head (5/16-18 x 3/4") Begin Spec B
45	862-0015	1	Nut, Hex (5/16-18) Begin Spec B
46	110-1282	1	Bolt, Cylinder Head (Special) (Guard Mounting) Sets With Low Engine Temperature Switch
47	505-0110	2	*Plug, Pipe - Square Head (3/8")
48	403-0620	2	Nut, Extension - Spec A
49	520-0622	2	Stud, Bracket Mounting - Spec A
50	309-0291	1	Guard, High Temperature Switch
51	SWITCH, HIGH TEMPERATURE		
	309-0156	1	Normally Closed - Sets Without High Temperature Indicator Lamp
	309-0483	1	Normally Open - Sets With High Temperature Indicator Lamp
52	813-0095	2	Screw, Machine - Round Head (#10-32 x 3/16")
53	850-0030	2	Washer, Lock - Spring (#10)

- # - Parts Included in 110-2986 Cylinder Head.
- + - Parts Included in 110-2985 Cylinder Head.
- * - Parts Included in 110-2984 and 110-1855 Cylinder Heads.
- ‡ - Included in Cylinder Block Assembly.
- ▷ - Parts Included in 115-0134 Rocker Cover Assembly.

Oil Base



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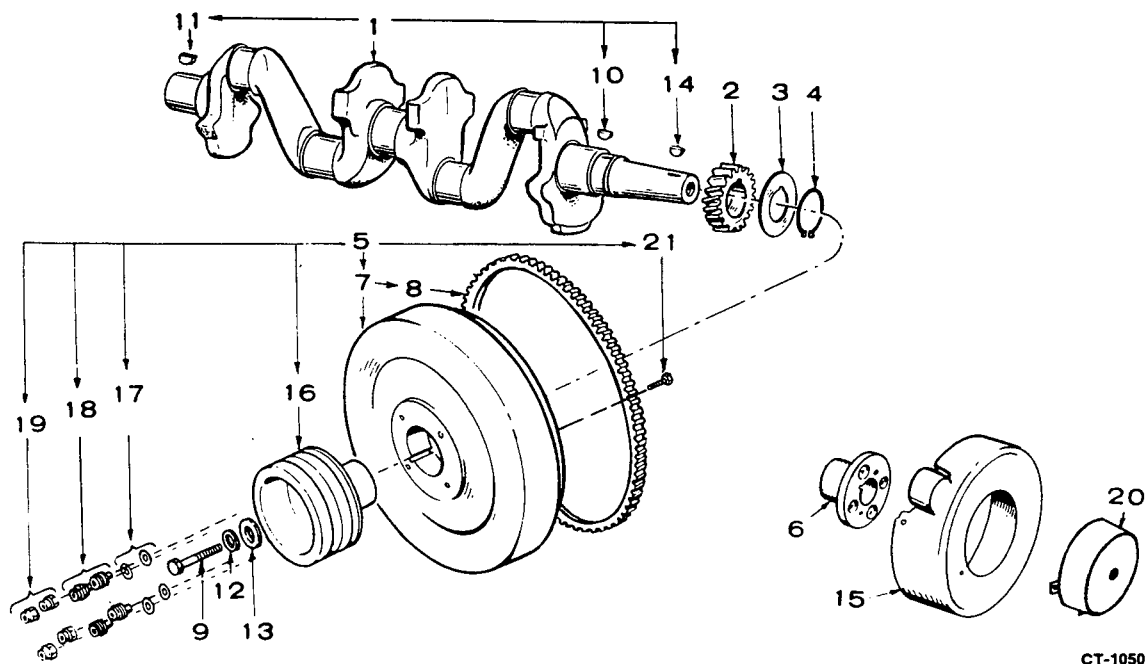
Oil Base

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	102-0539	1	Base, Oil
2	102-0475	1	Gasket, Oil Base
3	PAN DRIP		
	405-1280	1	Spec A
	405-1403	1	Begin Spec B
4	405-1265	2	Clamp, Drip Pan
5	CUSHION, VIBRATION		
	402-0285	2	Engine End - Begin Spec B Generator End
	402-0287	2	Spec B through Z
	402-0286	2	Begin Spec AA
6	505-0100	1	Nipple, Pipe (1/2" x Close) Begin Spec T
7	504-0011	1	Valve, Oil Drain - Begin Spec T
8	503-0197	1	Clamp, Hose - Begin Spec T
9	503-0316	1	Hose, Oil Drain - Begin Spec T
10	402-0360	4	Hardware Package, Mounting (Includes Parts Marked *) Begin Spec B
11	800-0081	4	*Screw, Cap - Hex Head (7/16-14 x 3-1/2") Begin Spec B
12	850-0055	4	*Washer, Lock - Spring (7/16") Begin Spec B
13	526-0128	4	*Washer, Flat (15/32" ID x 1-1/2" OD x 1/16" Thk) Begin Spec B
14	526-0198	8	*Washer, Flat (5/8" ID x 1-1/2" OD x 1/16" Thk) Begin Spec B (Use as Required)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
15	402-0282	4	*Snubber, Cushion Mounting - Begin Spec B
16	402-0290	4	*Bushing, Spacer - Begin Spec B
17	800-0072	10	Screw, Cap - Hex Head (7/16-14 x 1-1/4")
18	850-0055	10	Washer, Lock - Spring (7/16")
19	505-0472	1	Nipple, Pipe - Half (1/2" x 2") Begin Spec T
20	800-0025	8	Screw, Cap - Hex Head (5/16-18 x 5/8") Spec A
21	850-0045	8	Washer, Lock - Spring (5/16") Spec A
22	862-0005	4	Nut, Hex (1/2-13 x 31/64" Thk) Spec A
23	850-0060	4	Washer, Lock - Spring (1/2") Spec A
24	526-0100	4	Washer, Flat (9/16" ID x 1-3/8" OD x 7/64" Thk) Spec A
25	526-0182	8	Washer, Flat (17/32" ID x 2-7/8" OD x 1/4" Thk) Spec A
26	526-0035	2	Washer, Flat (17/32" ID x 7/8" OD x 1/8" Thk) Spec A (Generator End)
27	402-0245	4	Mount, Vibration - Spec A
28	SCREW, CAP - HEX HEAD - Spec A		
	800-0104	2	1/2-13 x 4-1/2"
	800-0106	2	1/2-13 x 5-1/2"

* - Parts Included in 402-0360 Mounting Hardware Package.

Crankshaft and Flywheel



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	134-3960	1	Hardware Kit, Hub Mounting (Includes Parts Marked †)
1	104-1361	1	Crankshaft Kit (Includes All Keys)
2	104-0418	1	Gear, Crankshaft
3	104-0416	1	Washer, Retainer
4	518-0188	1	Ring, Lock
5	FLYWHEEL ASSEMBLY		
	104-0555	1	Sets Without Heat Exchanger or Keel Cooling (Includes Parts Marked *)
	104-0548	1	Sets With Heat Exchanger or Keel Cooling (Includes Parts Marked #)
6	134-1401	1	*Hub, Flywheel - Sets Without Heat Exchanger or Keel Cooling
7	104-0547	1	*#Flywheel and Ring Gear
8	104-0423	1	*#Gear, Ring
9	800-0500	1	Screw, Flywheel Mounting (Special)
10	515-0001	1	Key, Crankshaft to Gear

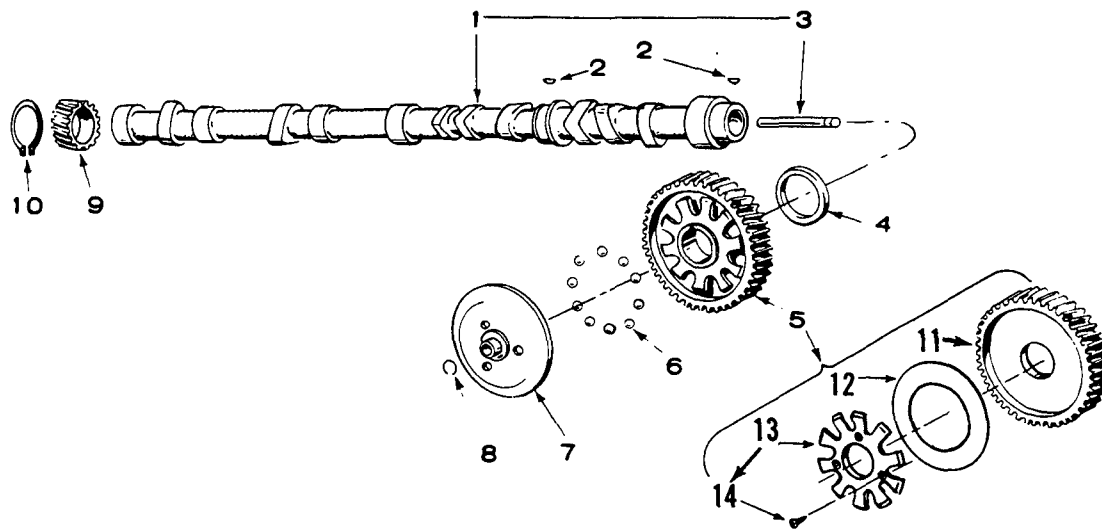
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	515-0006	1	Key, Crankshaft to Generator Fan
12	850-0055	1	Washer, Lock - Spring (7/16")
13	526-0185	1	Washer, Flat (15/32" ID x 1-1/2" OD x 3/8" Thk)
14	515-0153	1	Key, Crankshaft to Flywheel
15	104-0444	1	Guard, Flywheel
16	104-0957	1	#Hub and Pulley, Flywheel - Sets With Heat Exchanger or Keel Cooling
17	526-0187	4	†#Washer, Flat (Special)
18	104-0543	4	†#Spacer and Washer
19	870-0352	4	†#Nut, Locking (Special)
20	104-0594	1	Cover, Flywheel Guard - Sets Without Heat Exchanger or Keel Cooling
21	801-0054	4	†#Screw, Cap - Hex Head (3/8-24 x 2") Flywheel Hub Mounting

† - Parts Included in 134-3960 Hardware Kit

* - Parts Included in 104-0555 Flywheel Assembly

- Parts Included in 104-0548 Flywheel Assembly

Camshaft



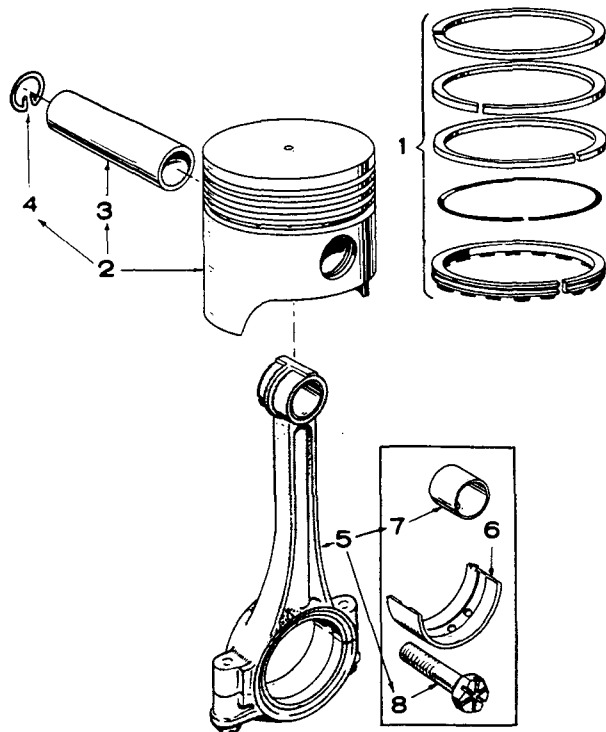
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REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	CAMSHAFT (Includes Center Pin)		
	105-0240	1	Spec A through N
	105-0274	1	Begin Spec P
2	515-0001	2	Key - Camshaft Gear and Injection Pump
3	150-0075	1	Pin, Camshaft Center
4	105-0205	1	Washer, Thrust
5	105-0218	1	Gear Assembly, Camshaft (Includes Parts Marked *)
6	510-0046	10	Flyball - Governor
7	150-0775	1	Cup, Governor
8	150-0078	1	Ring, Center Pin
9	147-0142	1	Gear, Injection Pump Drive
10	518-0195	1	Ring, Injection Pump Drive Gear
11	105-0465	1	*#Gear, Camshaft
12	150-0773	1	*#Plate, Governor Flyball
13	150-1842	1	*#Spacer Kit, Governor Flyball (Includes Mounting Screws)
14	815-0506	3	*Screw, Spacer Mounting (Special)

* - Parts Included in 105-0218 Camshaft Gear Assembly.

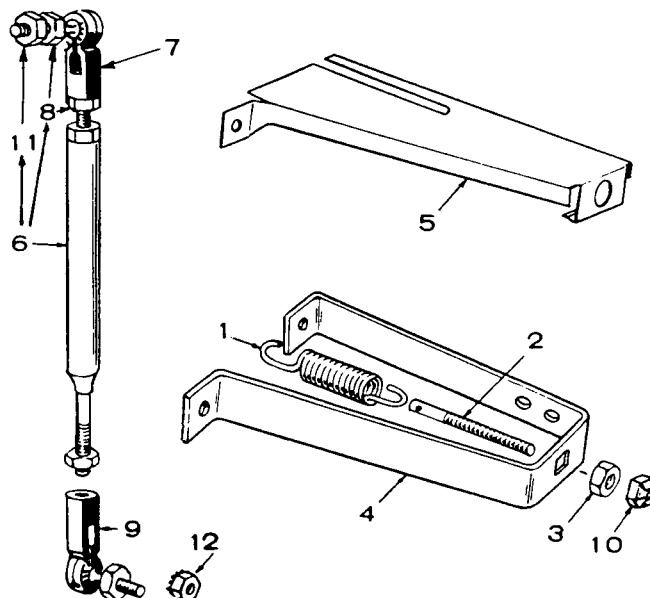
- Camshaft Gear Assemblies with Rivets Order 105-0218 Camshaft Gear Assembly.

Piston and Rod



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	RING SET		
	113-0130	4	Standard
	113-0130-05	4	.005" Oversize
	113-0130-10	4	.010" Oversize
	113-0130-20	4	.020" Oversize
	113-0130-30	4	.030" Oversize
	113-0130-40	4	.040" Oversize
2	PISTON AND PIN (Includes Pin Retaining Rings)		
			Spec A Through N
	112-0173	4	Standard
	112-0173-10	4	.010" Oversize
	112-0173-20	4	.020" Oversize
	112-0173-30	4	.030" Oversize
	112-0173-40	4	.040" Oversize
			Begin Spec P
	112-0175	4	Standard
	112-0175-05	4	.005" Oversize
	112-0175-10	4	.010" Oversize
	112-0175-20	4	.020" Oversize
	112-0175-30	4	.030" Oversize
	112-0175-40	4	.040" Oversize
3	112-0093	4	Pin, Piston
4	112-0085	8	Ring, Retaining
5	114-0168	4	Rod Assembly, Connecting
6	BEARING HALF, CONNECTING ROD		
	114-0164	8	Standard
	114-0164-02	8	.002" Undersize
	114-0164-10	8	.010" Undersize
	114-0164-20	8	.020" Undersize
	114-0164-30	8	.030" Undersize
7	114-0170	8	Bushing Half, Piston Pin - Connecting Rod
8	805-0012	8	Bolt, Place (Special)

Governor

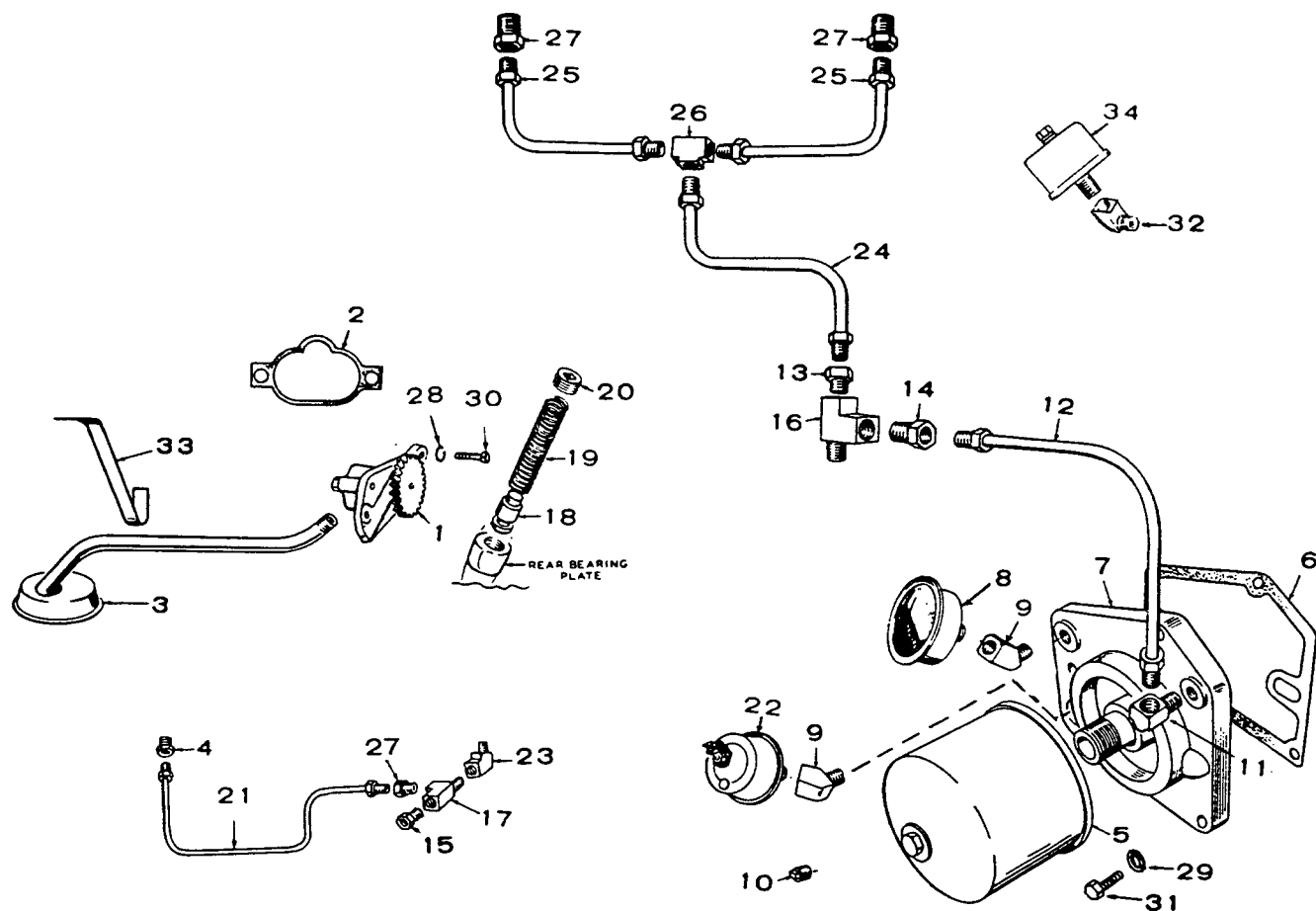


FS-1435

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	SPRING, GOVERNOR		
	150-0821	1	Spec A through Q
	150-1084	1	Begin Spec R
2	STUD, GOVERNOR ADJUSTING		
	150-0822	1	Spec A through Q
	150-1082	1	Begin Spec R
3	NUT, HEX		
	104-0091	1	Spec A through Q (3/8-24)
	862-0003	1	Begin Spec R (3/8-16)
4	BRACKET, GOVERNOR SPRING		
	150-0810	1	Spec A through Q
	150-1103	1	Begin Spec R
5	150-0823	1	Cover, Governor Spring
6	LINKAGE ASSEMBLY, GOVERNOR		
	150-0831	1	Spec A through Q
	150-1132	1	Begin Spec R
7	JOINT, BALL - GOVERNOR		
	150-0974	2	Spec A through Q
	150-1358	1	Begin Spec R
8	871-0010	2	Nut, Hex (#10-32)
9	150-0939	1	*Joint, Ball - Injection Pump (Begin Spec R)
10	NUT, SELF LOCKING		
	870-0130	1	Spec A through Q (3/8-24)
	870-0133	1	Begin Spec R (3/8-16)
11	870-0131	1	Nut, Hex - ET (#10-32)
12	870-0131	1	*Nut, Hex - ET (#10-32)

* - Parts Included With Replacement Injection Pump

Oil System

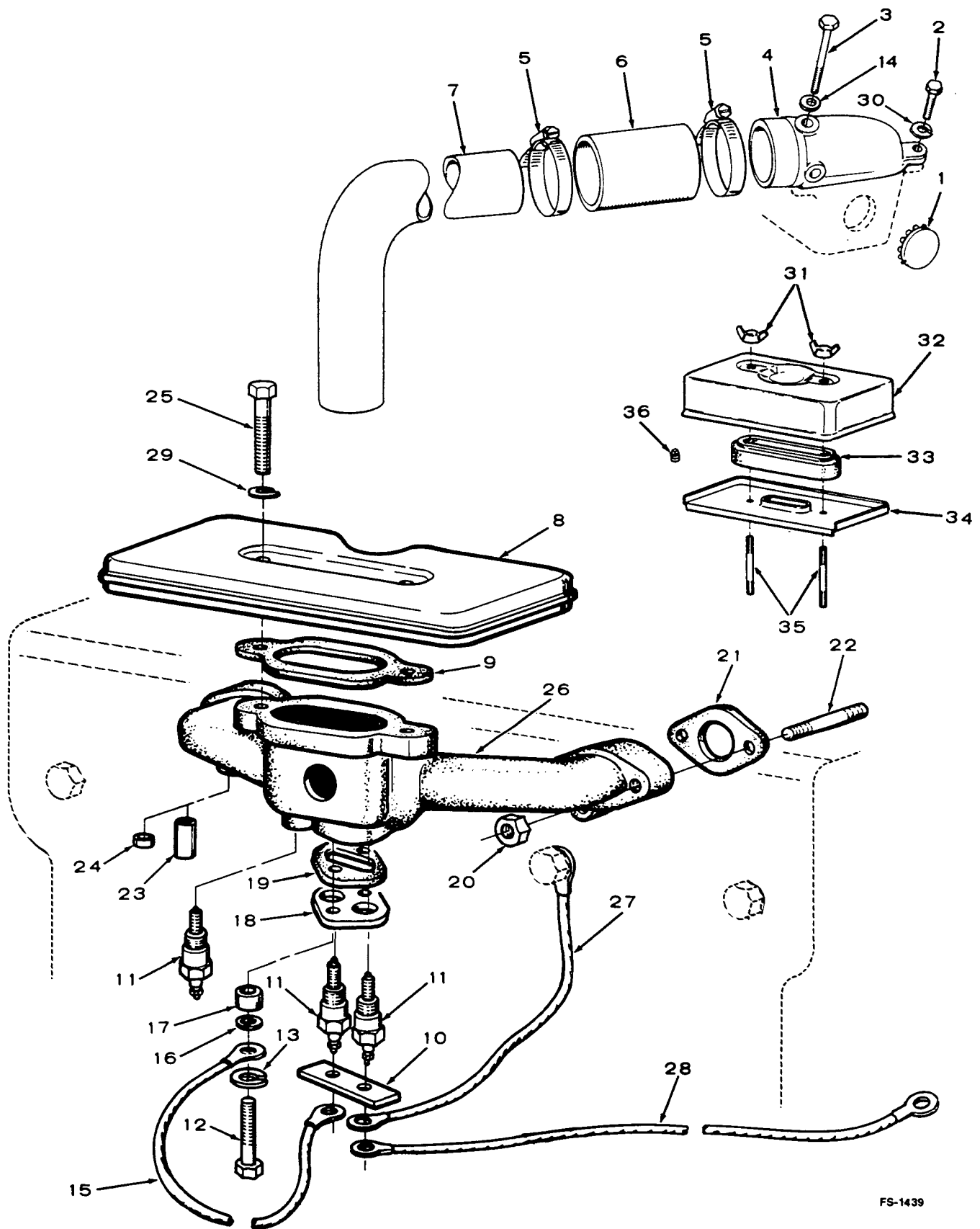


Oil System

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	120-0547	1	Pump Assembly, Oil
2	120-0580	1	Gasket Kit, Oil Pump
3	120-0601	1	Cup Assembly, Oil Pump Intake
4	CONNECTOR, FRONT CYLINDER HEAD TEE TO REAR CYLINDER HEAD LINE		
	502-0030	1	Spec A through N
	502-0097	1	Spec P through S
5	FILTER, OIL		
	122-0185	1	Standard (4-3/8" Long)
	122-0193	1	Optional Heavy Duty (5-3/4" Long)
6	122-0188	1	Gasket, Oil Adapter
7	122-0182	1	Adapter Assembly, Oil Filter
8	193-0006	1	Gauge, Oil Pressure
9	502-0053	2	Elbow, Restricted (45°) Oil Gauge
10	505-0057	2	Plug, Pipe (1/8")
11	ELBOW, OIL LINE TO ADAPTER		
	502-0019	1	Spec A through N
	502-0037	1	Begin Spec P
12	LINE, ADAPTER TO INJECTION PUMP TEE		
	120-0582	1	Spec A through N
	120-0636	1	Begin Spec P
13	CONNECTOR, INVERTED MALE - INJECTION PUMP LUBRICATION TEE		
	502-0030	1	Spec A through N
	502-0097	1	Begin Spec P
14	CONNECTOR, INVERTED MALE - INJECTION PUMP LUBRICATION TEE		
	502-0030	1	Spec A through N
	502-0274	1	Begin Spec P (Restricted)
15	CONNECTOR, INVERTED MALE - FRONT CYLINDER HEAD TEE		
	502-0030	1	Spec A through N
	502-0097	1	Begin Spec P
16	502-0242	1	Tee, Restricted - Injection Pump Lubrication

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
17	502-0282	1	Tee, Restricted - Front Cylinder Head - Spec A through S
18	120-0539	1	Valve, Oil By-Pass
19	120-0555	1	Spring, By-Pass Valve
20	505-0006	1	Plug, Pipe - Countersunk - Oil By-Pass
21	LINE, OIL - REAR CYLINDER HEAD		
	120-0575	1	Spec A through N
	120-0635	1	Spec P through S
22	309-0169	1	Switch, Low Oil Pressure Cut-Off (Optional)
23	502-0053	1	Elbow, Street - 45° - Cylinder Head Tee - Spec A through S
24	LINE, OIL - INJECTION PUMP TEE TO CYLINDER HEAD TEE		
	120-0583	1	Spec A through N
	120-0630	1	Spec P through S
	120-0697	1	Begin Spec T
25	120-0695	2	Line, Oil - Cylinder Head - Begin Spec T
26	502-0373	1	Tee, Inverted Flare - Begin Spec T
27	CONNECTOR, INVERTED MALE - CYLINDER HEAD		
	502-0097	1	Rear - Spec A through N
	502-0281	1	Rear - Begin Spec P
	502-0281	1	Front - Begin Spec T
28	850-0045	2	Washer, Lock - Spring (5/16")
29	850-0045	3	Washer, Lock - Spring (5/16")
30	800-0030	2	Screw, Cap - Hex Head (5/16-18 x 1-1/4")
31	800-0028	3	Screw, Cap - Hex Head (5/16-18 x 1")
32	502-0053	1	Elbow, 45° - Low Oil Pressure Switch (Optional)
33	120-0602	1	Bracket, Oil Pump Intake Cup
34	193-0108	1	Sendor, Oil Pressure - Optional

Air Intake System



FS-1439

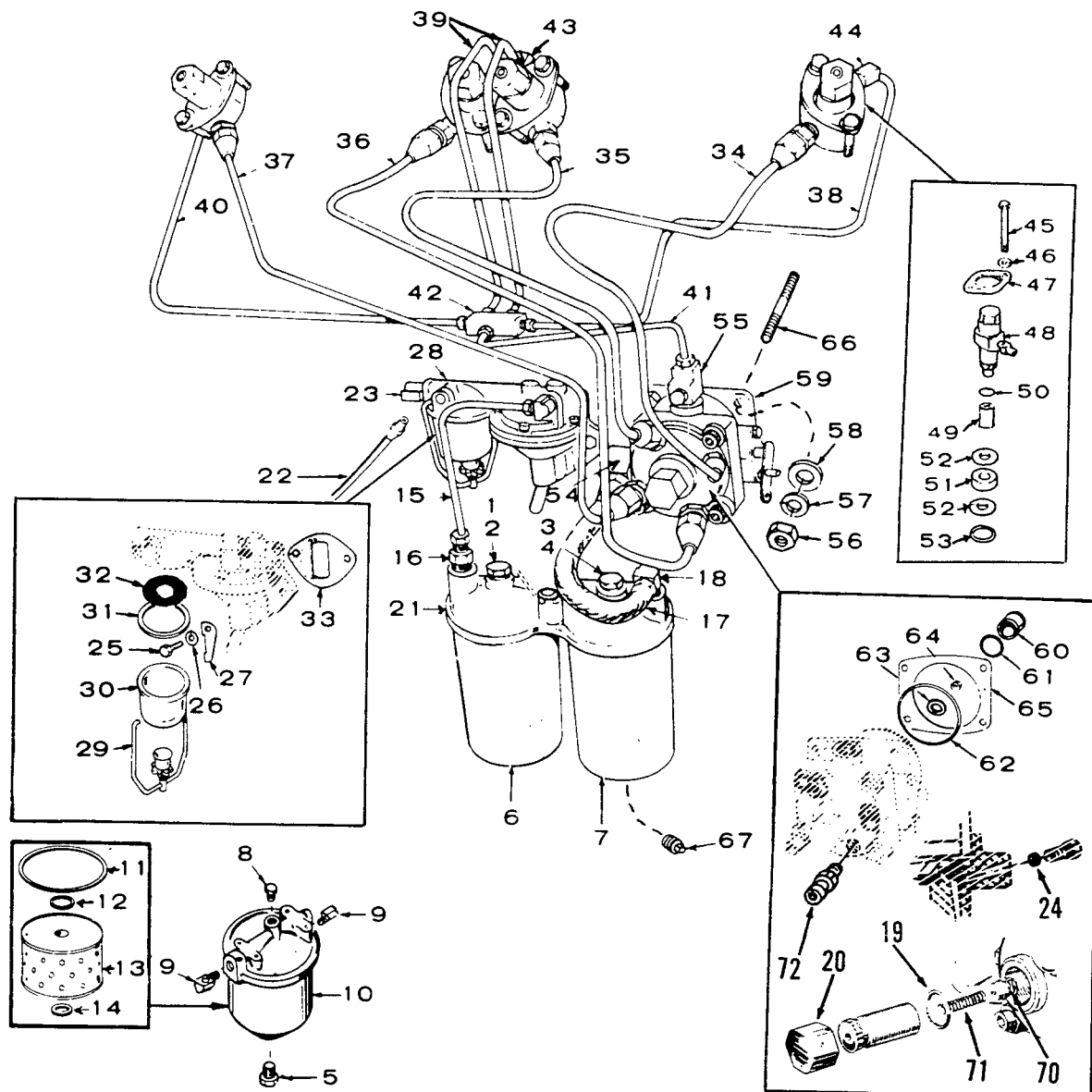
Air Intake System

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	517-0186	1	Plug, Dot Button - Sets With Sound Shield Housing
2	800-0006	1	Screw, Cap - Hex Head (1/4-20 x 7/8") Sets With Sound Shield Housing
3	800-0015	1	Screw, Cap - Hex Head (1/4-20 x 3") Sets With Sound Shield Housing
4	140-0645	1	Adapter, Air Intake - Sets With Sound Shield Housing
5	503-0365	2	Clamp, Hose - Sets With Sound Shield Housing
6	503-0691	1	Hose, Rubber - Sets With Sound Shield Housing
7	140-1278	1	Tube, Intake - Sets With Sound Shield Housing
8	140-0803	1	Resonator - Begin Spec C
9	140-0584	1	Gasket, Resonator
10	332-0829	1	Jumper, Air Heater
11	HEATER, MANIFOLD		
	154-0712	2	12 and 24 Volt DC Sets
	154-0712	3	32 Volt DC Sets
12	114-0023	2	Screw, Cap - Hex Head (Special)
13	WASHER		
	850-0040	2	Lock - Spring (1/4") Flat (9/32" ID x 9/16" OD x 1/16" Thk)
	526-0015	1	24 Volt DC Sets
	526-0015	2	32 Volt DC Sets
14	526-0108	1	Washer, Flat (17/64" ID x 7/16" OD x 1/32" Thk) Sets With Sound Shield Housing
15	LEAD		
	336-1408	1	24 Volt DC Sets
	336-1051	1	32 Volt DC Sets
16	508-0102	2	Washer, Insulator - 24 and 32 Volt DC Sets
17	508-0103	2	Bushing, Insulator
18	140-0705	1	Plate, Heater
19	140-0706	1	Gasket, Heater Plate
20	870-0137	4	Nut, Hex - Self-Locking (5/16-24)
21	154-0733	2	Gasket, Intake Manifold

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
22	STUD, MANIFOLD MOUNTING		
	520-0011	2	5/16-24 x 5/16-18 x 1-7/16"
	520-0338	2	5/16-18 x 5/16-24 x 2-7/8"
23	123-0732	1	*Tube, Breather - Spec A Thru S
24	517-0104	1	*Plug, Core Hole - Begin Spec T
25	800-0012	2	Screw, Cap - Hex Head (1/4-20 x 2-1/4") Begin Spec C
26	MANIFOLD KIT, INTAKE (Includes Parts Marked*)		
			Spec A and B
	154-1378	1	12 and 24 Volt DC Sets
	154-1377	1	32 Volt DC Sets
			Begin Spec C
	154-1376	1	12 and 24 Volt DC Sets
	154-1379	1	32 Volt DC Sets
27	LEAD — Glow Plug to Air Heater		
			Spec A
	336-1314	1	No. 1 Cylinder (10-1/4")
	336-1313	2	No. 2 and No. 3 Cylinder (5-1/4")
	336-1333	1	No. 4 Cylinder (18")
			Begin Spec B
	336-1504	2	No. 1 and No. 4 Cylinder (12-1/4")
	336-1505	2	No. 2 and No. 3 Cylinder (5-1/4")
28	336-1331	1	Lead - Air Heater to Control Solenoid
29	850-0040	2	Washer, Lock - Spring (1/4") Begin Spec C
30	850-0040	1	Washer, Lock - Spring (1/4") Sets With Sound Shield Housing
31	865-0020	2	Nut, Wing - Spec A and B
32	140-0594	1	Cover, Air Cleaner - Spec A and B
33	140-0606	1	Element and Retainer - Spec A and B
34	140-0607	1	Pan, Air Cleaner - Spec A and B
35	520-0621	2	Stud - Spec A and B
36	505-0054	1	Plug, Pipe - Square Head (1/4") Spec A and B Intake Manifold

* - Parts Included in Intake Manifold Kits.

Fuel Injection System



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	149-1046	1	Repair Kit, Fuel Pump (Includes Diaphragm and Gaskets)
1	801-0074	1	Screw, Cap - Hex Head (7/16-20 x 1-3/4") Begin Spec S
2	526-0068	1	Washer, Flat - Copper (29/64" ID 3/4" OD x 1/16") Begin Spec S
3	801-0053	1	Screw, Cap - Hex Head (3/8-24 x 1-3/4") Begin Spec S
4	526-0066	1	Washer, Flat - Copper (25/64" ID x 9/16" OD x 11/16" Thk) Begin Spec S
5	502-0028	1	Plug, Hex Head - Spec A Through R
6	122-0325	1	Filter, Fuel - Primary Begin Spec S
7	122-0326	1	Filter, Fuel - Secondary Begin Spec S

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
8	149-0769	1	Plug, Air Bleed - Spec A Through R
9	502-0041	2	Elbow, Fuel Filter Inlet and Outlet - Spec A Through R
10	149-0408	1	Filter, Fuel (Includes Cartridge) Spec A Through R
11	149-0456	1	Gasket, Bowl to Cover - Spec A Through R
12	149-0455	1	Gasket, Bowl to Cover - Spec A Through R
13	149-0428	1	Cartridge, Fuel Filter - Spec A Through R
14	149-0493	1	Gasket, Cartridge to Retainer - Spec A Through R
15	LINE, FUEL - Pump to Primary Filter		
	149-0806	1	Spec A Through R
	149-1189	1	Begin Spec S
16	502-0003	1	Connector, Pipe - Begin Spec S

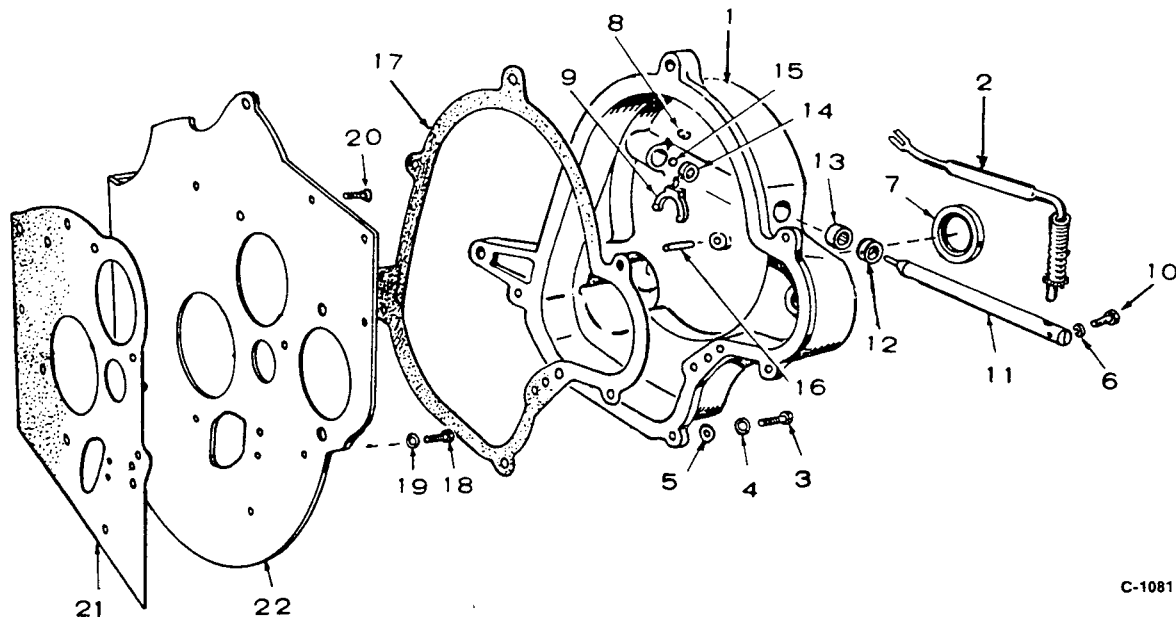
FS-1586

Fuel Injection System

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
17	LINE, FUEL - Secondary Filter to Injection Pump			48	147-0136	4	Nozzle and Holder Assembly (Includes Parts Marked +)
	501-0091	1	Spec A Through R	49	147-0134	4	+Nozzle - Includes Nozzle Gasket
	501-0129	1	Begin Spec S	50	147-0243	4	+Gasket, Nozzle
18	502-0099	1	Elbow, Reducer - Begin Spec S	51	147-0043	4	Gasket, Nozzle Heat Shield (Asbestos)
19	147-0254	1	*‡Gasket, Delivery Valve Cap	52	147-0044	8	Shield, Nozzle Heat (Steel)
20	147-0253	1	Cap, Delivery Valve	53	110-0419	4	Gasket, Shield to Head (Copper)
21	149-1185	1	Adapter, Fuel Filter - Begin Spec S	54	ELBOW, PIPE - Injection Pump Inlet		
22	501-0242	2	Line, Fuel - Flexible (24") Fuel Pump Inlet and Fuel Return		502-0054	1	Spec A Through R
23	502-0002	2	Elbow, Pipe - 90° (Inlet and Outlet)		502-0039	1	Begin Spec S
24	147-0203	1	*‡Gasket, Copper - Timing Screw	55	147-0577	1	*‡Fitting, Fuel Overflow
25	800-0027	2	#Screw, Cap - Hex Head (5/16-18 x 7/8")	56	110-0445	4	Nut, Hex (Special)
26	850-0045	2	Washer, Lock - Spring (5/16")	57	850-0045	4	Washer, Lock-Spring (5/16")
27	149-1307	2	#Stiffener, Fuel Pump Flange	58	526-0022	4	Washer, Flat (21/64" ID x 9/16" OD x 1/16" Thk)
28	149-1703	1	Pump Kit, Fuel (Includes Parts Marked #)	59	PUMP KIT, INJECTION		
29	149-1006	1	#Bail, Fuel Pump Bowl		147-0231	1	Spec A Through Q (Includes Governor Ball Joint, Nut and Parts Marked *)
30	149-1964	1	#Bowl, Fuel Pump		147-0232	1	Begin Spec R (Includes Governor Ball Joint, Nut and Parts Marked ‡)
31	149-0517	1	#Gasket, Fuel Pump Bowl	60	147-0182	1	*‡Tappet, Injection Pump
32	149-0463	1	#Screen, Fuel Pump	61	147-0196	1	*‡Gasket, "O" Ring - Injection Pump Tappet
33	149-0792	1	#Gasket, Fuel Pump Mounting	62	509-0094	1	*‡Seal, "O" Ring - Injection Pump Mounting
34	LINE, INJECTION - No. 1 Cylinder			63	147-0259	1	*‡Ring, Retaining - Timing Button
	149-0963	1	Spec A Through Q	64	BUTTON, INJECTION PUMP PLUNGER		
	149-1150	1	*Begin Spec R		147-0147	1	*‡.119 - Marked 1 or A
35	LINE, INJECTION - No. 2 Cylinder				147-0148	1	*‡.116 - Marked 2 or B
	149-0964	1	Spec A Through Q		147-0149	1	.113 - Marked 3 or C
	149-1151	1	*Begin Spec R		147-0150	1	.110 - Marked 4 or D
36	LINE, INJECTION - No. 3 Cylinder				147-0151	1	.107 - Marked 5 or E
	149-0919	1	Spec A		147-0161	1	.104 - Marked 1 or No Mark
	149-0965	1	Spec B Through Q		147-0152	1	.101 - Marked 6 or F
	149-1152	1	*Begin Spec R		147-0153	1	.098 - Marked 7 or H
37	LINE, INJECTION - No. 4 Cylinder				147-0154	1	.095 - Marked 8 or J
	149-0920	1	Spec A		147-0155	1	.092 - Marked 9 or K
	149-0966	1	Spec B Through Q		147-0156	1	.089 - Marked 10 or L
	149-1153	1	*Begin Spec R		147-0190	1	*‡.122 - Marked 12 or M
38	LINE, FUEL RETURN - No. 1 Cylinder				147-0189	1	*‡.125 - Marked 13 or N
	149-0909	1	Spec A Through N		147-0188	1	.128 - Marked 14 or P
	149-1060	1	Begin Spec P		147-0187	1	.131 - marked 15 or R
39	LINE, FUEL RETURN - No. 2 and No. 3 Cylinders				147-0186	1	.134 - Marked 16 or S
	149-0908	2	Spec A Through N	65	147-0145	1	Shim Kit - Injection Pump Mounting
	149-1059	2	Begin Spec P	66	520-0129	4	Stud, Injection Pump Mounting
40	LINE, FUEL RETURN - No. 4 Cylinder			67	502-0080	2	Plug, Square Head
	149-0910	1	Spec A Through N	70	147-0258	1	*‡Spacer, Valve
	149-1061	1	Begin Spec P	71	147-0256	1	*‡Spring, Delivery Valve
41	LINE, FUEL RETURN - Adapter Tee to Injection Pump			72	147-0287	4	*‡Fitting, Discharge
	149-0949	1	Spec A Through N				
	149-1062	1	Begin Spec P				
42	502-0245	1	Tee, Adapter - Fuel Return Lines				
43	502-0002	2	Elbow, Pipe (90°) No. 2 and No. 3 Nozzle Fuel Return Outlet				
44	502-0065	2	Elbow, Pipe (45°) No. 1 and No. 4 Nozzle Fuel Return Outlet				
45	114-0171	8	Screw, Cap - Hex Head (Special)				
46	526-0122	8	Washer, Flat (11/32" ID x 23/32" OD x 0.1345 Thk)				
47	147-0141	4	Flange, Injection Nozzle Hold-down				

- Parts Included in 149-1703 Fuel Pump Kit
+ - Parts Included in 147-0136 Nozzle and Holder Assembly
* - Parts Included in 147-0231 Injection Pump Kit
‡ - Parts Included in 147-0232 Injection Pump Kit

Gearcase



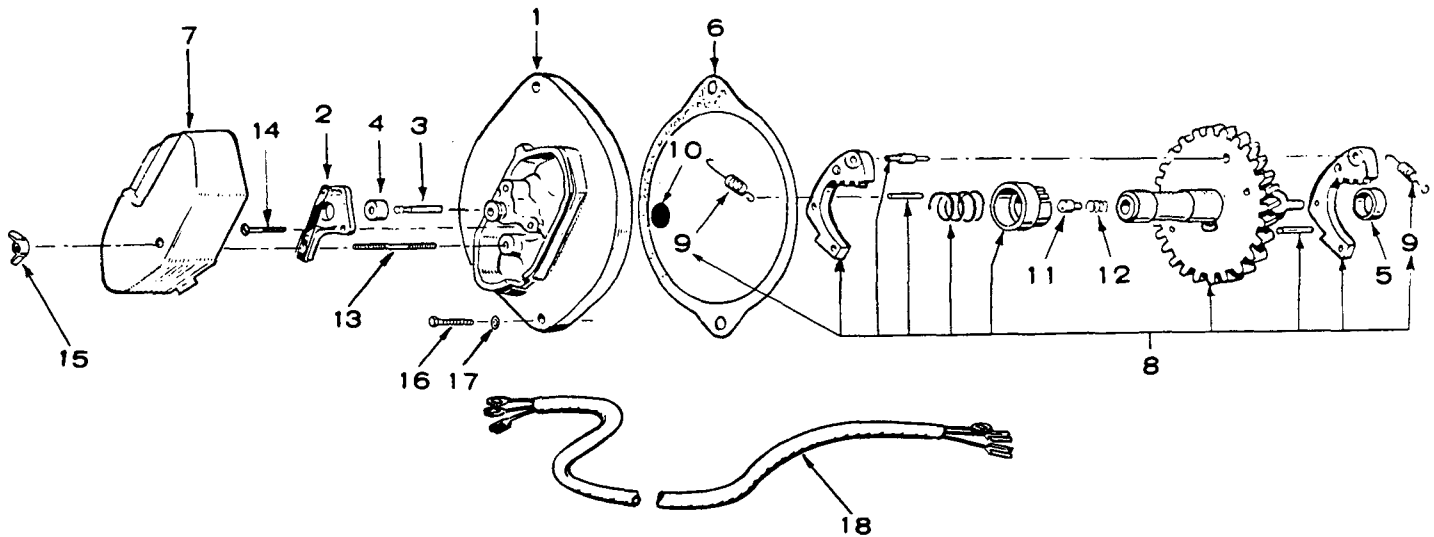
C-1081

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	103-0267	1	Gearcase Assembly (Includes Parts Marked *)
2	ARM, GOVERNOR		
	150-0847	1	Spec A through Q
	150-1095	1	Begin Spec R
3	SCREW, CAP - HEX HEAD		
	800-0028	1	5/16-18 x 1"
	110-0879	4	Special
4	850-0045	5	Washer, Lock - Spring (5/16")
5	526-0115	5	Washer, Flat (11/32" ID x 11/16" OD x 1/16" Thk)
6	850-0025	1	*Washer, Lock - Spring (#8)
7	509-0087	1	*Seal, Oil - Crankshaft
8	518-0129	1	*Ring, Retaining - Yoke
9	150-0777	1	*Yoke, Governor
10	815-0176	1	*Screw, Machine - Hex Head (#8-32 x 1/2")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	150-0838	1	*Shaft, Governor
12	509-0088	1	*Seal, Oil - Governor Shaft
13	510-0048	1	*Bearing, Needle - 1/2" Shaft
14	510-0082	1	*Bearing, Needle - 1 4" Shaft
15	510-0043	1	*Ball, Bearing
16	516-0117	1	*Pin, Roll
17	103-0251	1	Gasket, Gearcase
18	800-0026	1	Screw, Cap - Hex Head (5/16-18 x 3/4")
19	850-0045	1	Washer, Lock - Spring (5/16")
20	815-0347	2	Screw, Machine - Flat Head - Socket Driven (1.4-20 x 1/2")
21	103-0218	1	Gasket, Backplate
22	103-0228	1	Backplate

* - Parts Included in 103-0267 Gearcase Assembly.

Start Disconnect Switch

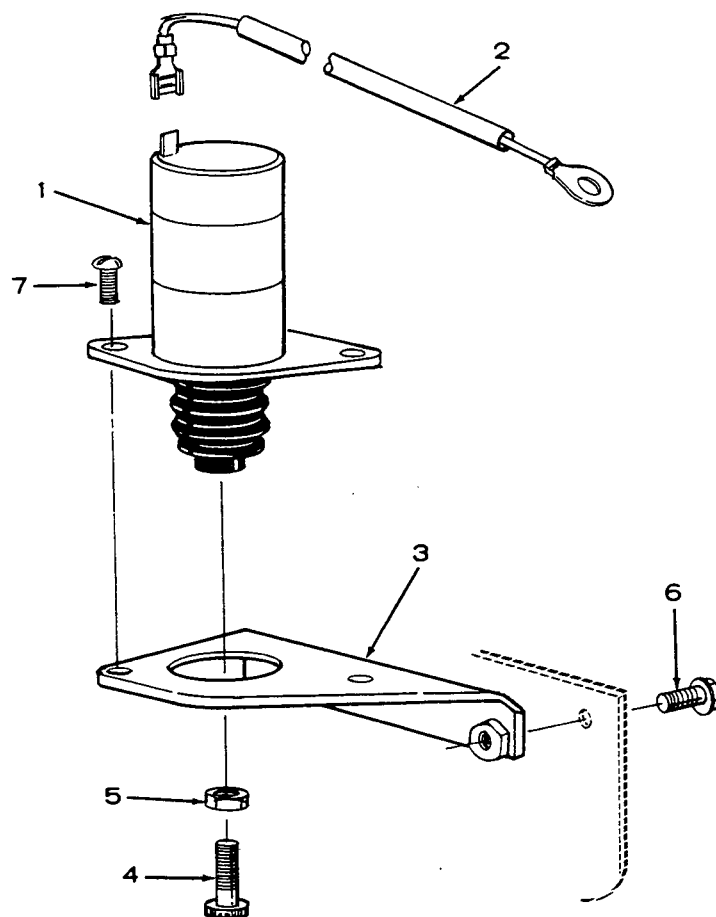


ES-1327

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0496	1	Plate
2	309-0438	1	Switch Assembly (Includes Leads)
3	309-0152	1	Plunger, Switch
4	160-0382	1	Diaphragm, Switch Plunger
5	160-0720	1	Spacer, Switch Plate
6	160-0721	1	Gasket, Plate
7	191-0392	1	Cover, Switch Plate
8	CONTROL ASSEMBLY, SWITCH		
	191-0390	1	Spec A through C
	191-0554	1	Begin Spec D
9	160-0711	2	Spring, Weight (Included in Switch Control Assembly)
10	160-0806	1	Disc, Thrust Plunger

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	160-0774	1	Plunger, Thrust
12	160-0773	1	Spring, Thrust Plunger
13	520-0347	1	Stud, Plate Cover (Special)
14	815-0201	2	Screw, Machine - Brass - Round Head with ET (#8-32x3/8")
15	865-0011	1	Nut, Wing (#10-32)
16	800-0052	2	Screw, Cap - Hex Head (3/8-16 x 1-1/2")
17	850-0050	2	Washer, Lock - Spring (3/8")
18	338-0263	1	Harness, Wiring - Switch Plate to Control

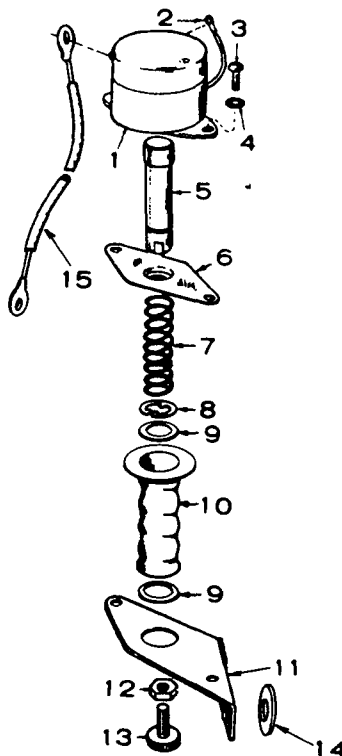
Stop Solenoid
Begin Serial Number D810563539 During Spec AB



FS-1240

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	SOLENOID, STOP		
	307-1904	1	12 Volt DC Sets
	307-1930	1	24 Volt DC Sets
	307-2393	1	32 Volt DC Sets
2	336-7290	1	Lead - Solenoid to Cylinder Head High Temperature Switch
3	306-2254	1	Bracket, Solenoid Mounting
4	306-2256	1	Screw, Solenoid Adjusting
5	862-0001	1	Nut, Hex (1/4-20)
6	821-0010	2	Screw, Hex Locking Head (Flange) (1/4-20 x 1/2")
7	812-0148	2	Screw, Machine - Round Head (1/4-20 x 1/2")

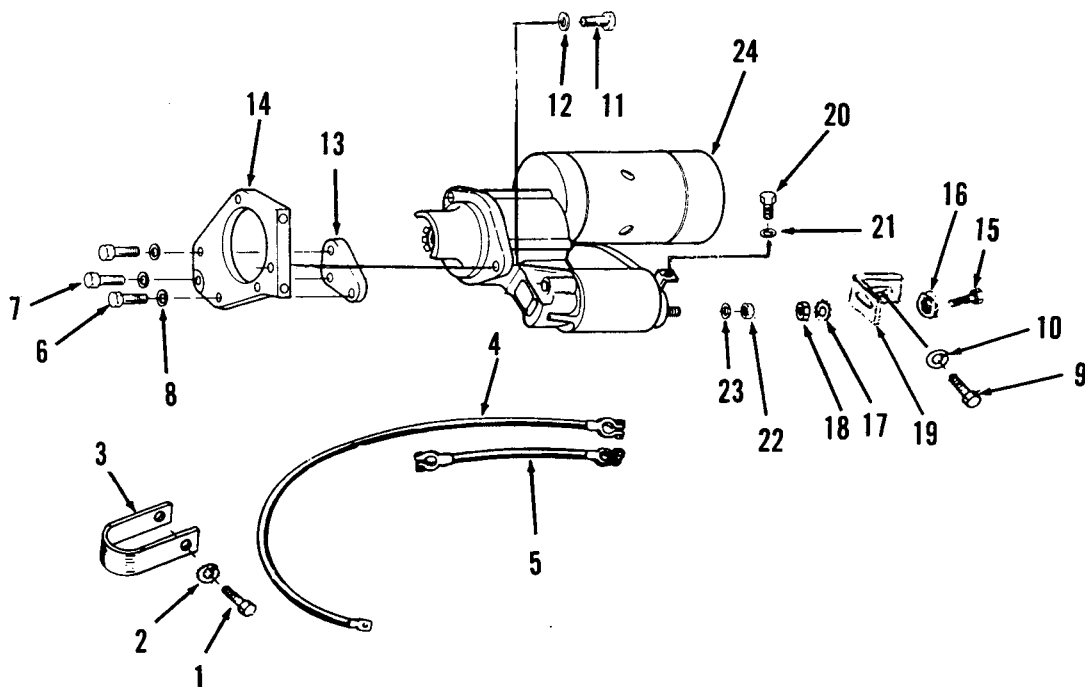
Stop Solenoid
Prior To Serial Number D810563539 During Spec AB



ES-1328

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	SOLENOID KIT, STOP (Complete Replacement)			8	518-0203	1	Ring, Snap - Spring Retaining
	307-2026	1	12 Volt DC Sets	9	518-0218	2	Ring, Retaining
	307-2027	1	24 Volt DC Sets	10	306-0193	1	Cover, Solenoid Plunger
	307-2394	1	32 Volt DC Sets	11	306-0158	1	Bracket, Solenoid
2	334-0028	1	Lead, Ground	12	862-0001	1	Nut, Hex (1/4-20)
3	812-0148	2	Screw, Machine - Round Head (1/4-20 x 1 1/2")	13	306-0242	1	Screw, Solenoid Adjusting
4	850-0040	2	Washer, Lock - Spring (1/4")	14	526-0180	1	Spacer, Solenoid Bracket Mounting
5	306-0159	1	Plunger, Solenoid	15	336-1742	1	Lead, Stop Solenoid to High Water Temperature Switch
6	306-0162	1	Retainer, Solenoid Plunger				
7	306-0161	1	Spring, Solenoid Plunger				

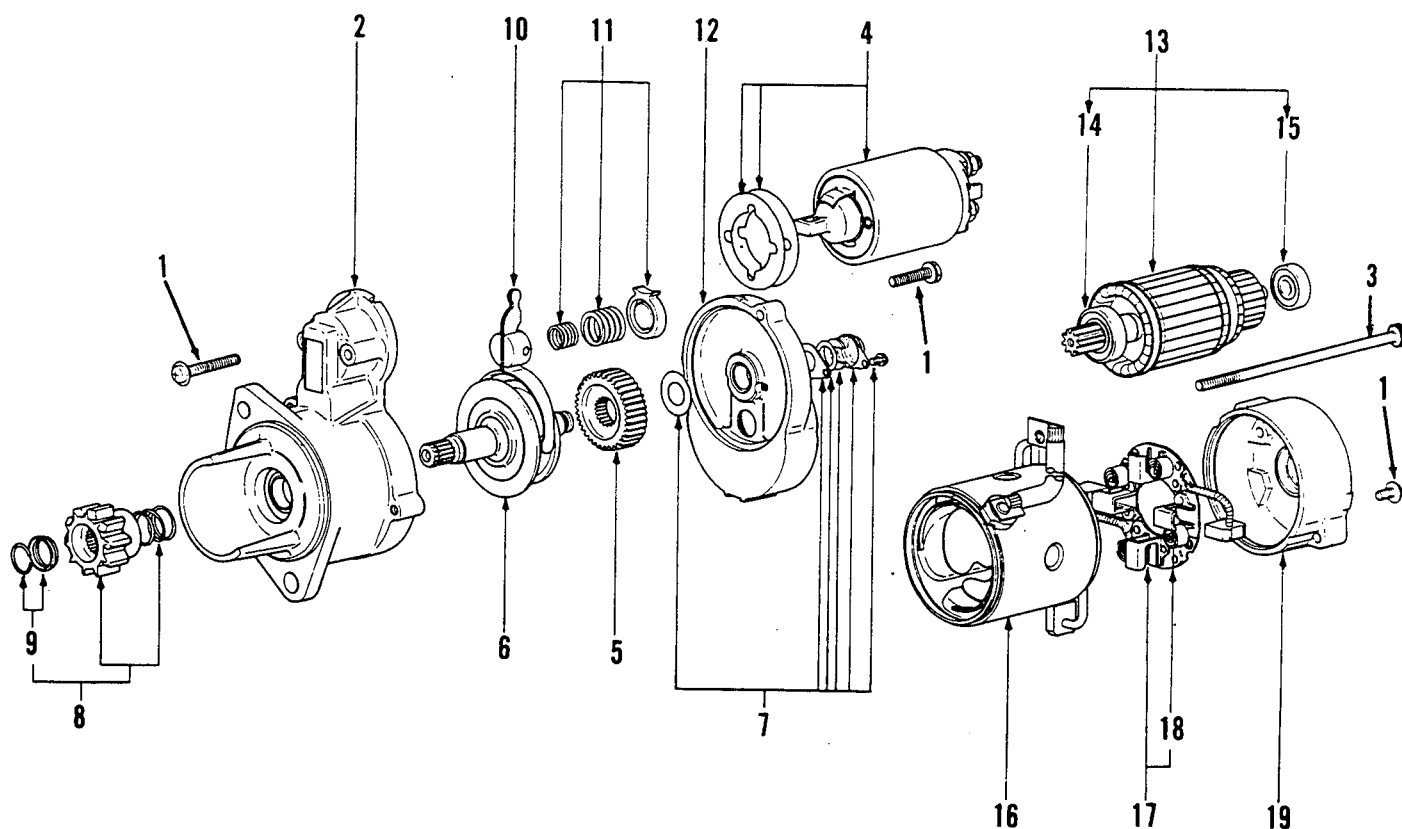
Starter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	800-0047	1	Screw, Cap - Hex Head (3/8-16 x 5/8")
2	856-0010	1	Washer, Lock - EIT (3/8")
3	416-0096	1	Clamp, Cable
4	416-0021	2	Cable, Battery 20"
	416-0077	2	28"
5	416-0133	1	Cable, Battery - Jumper
6	800-0054	2	Screw, Cap - Hex Head (3/8-16 x 2")
7	800-0053	1	Screw, cap - Hex Head (3/8-16 x 1-3/4")
8	800-0050	3	Washer, Lock - Spring (3/8")
9	800-0052	1	Screw, Cap - Hex Head (3/8-16 x 1-1/2") Spec A Thru AB
10	856-0010	1	Washer, Lock - EIT (3/8") Spec A Thru AB
11	800-0051	2	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
12	850-0050	2	Washer, lock - Spring (3/8")
13	191-0311	1	Spacer

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14			Flange, Mounting - 12 Volt Starters
	191-1400	1	Begin Spec AC
	191-1190	1	Spec A Thru AB
	191-1190	1	All 24 & 32 Volt Starters
15	800-0046	1	Screw, Cap - Hex Head (3/8-16 x 1/2")
16	526-0026	1	Washer, Flat (3/8")
17	856-0010	1	Washer, Lock - EIT (3/8")
18	864-0003	1	Nut, Hex (3/8-16)
19	191-0365	1	Bracket (Spec A Thru AB)
20	800-2000	1	Screw, Cap - Hex Head (M5 x 8mm) Begin Spec AC
21	850-2005	1	Washer, Lock - Spring (M5) Begin Spec AC
22	860-2008	1	Nut, Hex (M8) Terminal Begin Spec AC
23	850-2008	1	Washer, Lock - Spring (M8) Begin Spec AC
24			Starter (See Separate Page For Components)
	191-1399	1	12 VDC Begin Spec AC
	191-0324	1	12 VDC Spec A Thru AB
	191-0443	1	24/32 VDC

Starter Components (191-1399)



XES-1361

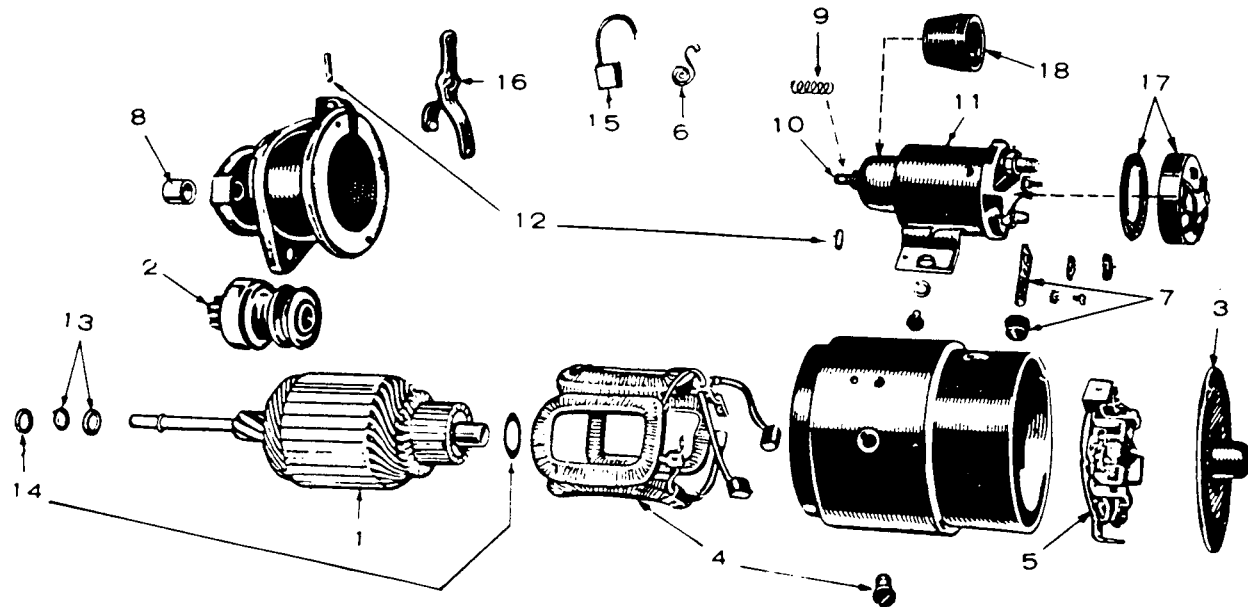
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-1450	1	Screw Set
2	191-1479	1	Bracket, Front - Includes Bearing
3	191-1431	1	Bolt Set
4	191-1486	1	Switch
5	191-1446	1	Gear
6	191-1482	1	Clutch
7	191-1444	1	Cover Set
8	191-1483	1	Pinion Set (Includes Parts Marked *)
9	191-1442	1	*Stopper Set
10	191-1484	1	Lever
11	191-1440	1	Spring Set
12	191-1439	1	Bracket, Center
13	191-1438	1	Armature Assembly (Includes Parts Marked #)
14	191-1437	1	#Bearing, Center
15	191-1436	1	#Bearing, Rear
16	191-1485	1	Yoke - Includes Pole Shoes, Field Coil and Positive Brushes
17	191-1434	1	Holder Assembly, Brush (Includes Negative Brushes and Parts Marked ‡)
18	191-1433	4	‡Spring, Brush
19	191-1432	1	Bracket, Rear

* - Parts Included in 191-1483 Pinion Set

- Parts Included in 191-1438 Armature Assembly

‡ - Parts Included in 191-1434 Brush Holder Assembly

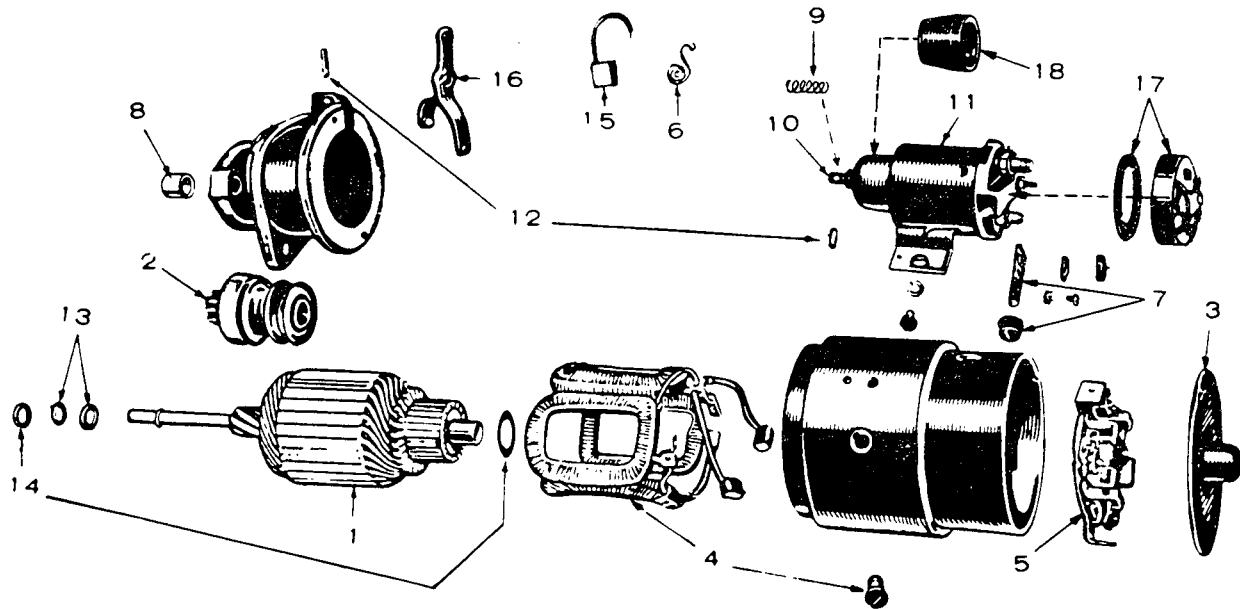
Starter Components (191-0324)



ES-1098

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0712	1	Armature	11	191-0433	1	Switch, Solenoid
2	191-0432	1	Clutch	12	191-1029	1	Yoke Parts Package
3	191-1023	1	Head Assembly, Commutator End	13	191-1030	1	Stop and Lock Ring Package, Pinion
4	191-1024	1	Coil Package, Field	14	191-1031	1	Thrust Washer Package, Armature (Use as Required)
5	191-1025	1	Plate Assembly, Brush	15	191-0434	1	Brush Set, Service
6	191-1020	1	Spring Set, Brush (Set of 4)	16	191-1032	1	Yoke
7	191-1263	1	Connector Package	17	191-1569	1	Switch Cover and Stud Package
8	191-0497	1	Bearing (Bronze), Drive End	18	191-1134	1	Boot, Rubber - Part of Moving Core Assembly
9	191-1027	1	Spring, Plunger				
10	191-1028	1	Core Assembly, Moving				

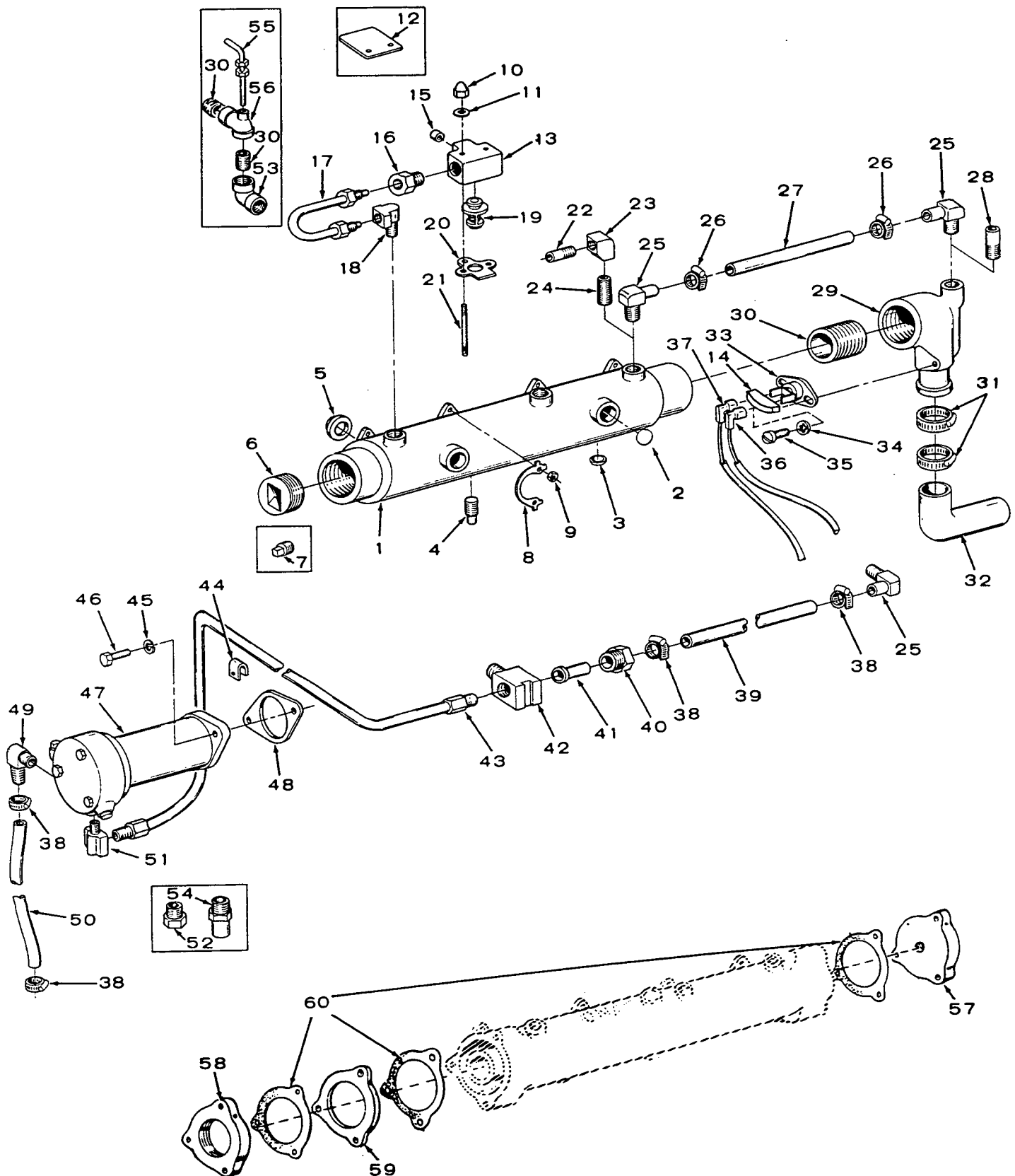
Starter Components (191-0443)



ES-1098

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0713	1	Armature	11	191-0715	1	Switch, Solenoid
2	191-0432	1	Clutch	12	191-1029	1	Yoke Parts Package
3	191-1023	1	Head Assembly, Commutator End	13	191-1030	1	Stop and Lock Ring Package, Pinion
4	191-1043	1	Coil Package, Field	14	191-1031	1	Thrust Washer Package, Armature (Use as Required)
5	191-1042	1	Plate Assembly, Brush	15	191-0714	1	Brush Set, Service
6	191-1020	1	Spring Set, Brush (Set of 4)	16	191-1032	1	Yoke
7	191-1263	1	Connector Package	17	191-1569	1	Switch Cover and Stud Package
8	191-0497	1	Bearing (Bronze), Drive End	18	191-1134	1	Boot, Rubber - Part of Moving Core Assembly
9	191-1027	1	Spring, Plunger				
10	191-1028	1	Core Assembly, Moving				

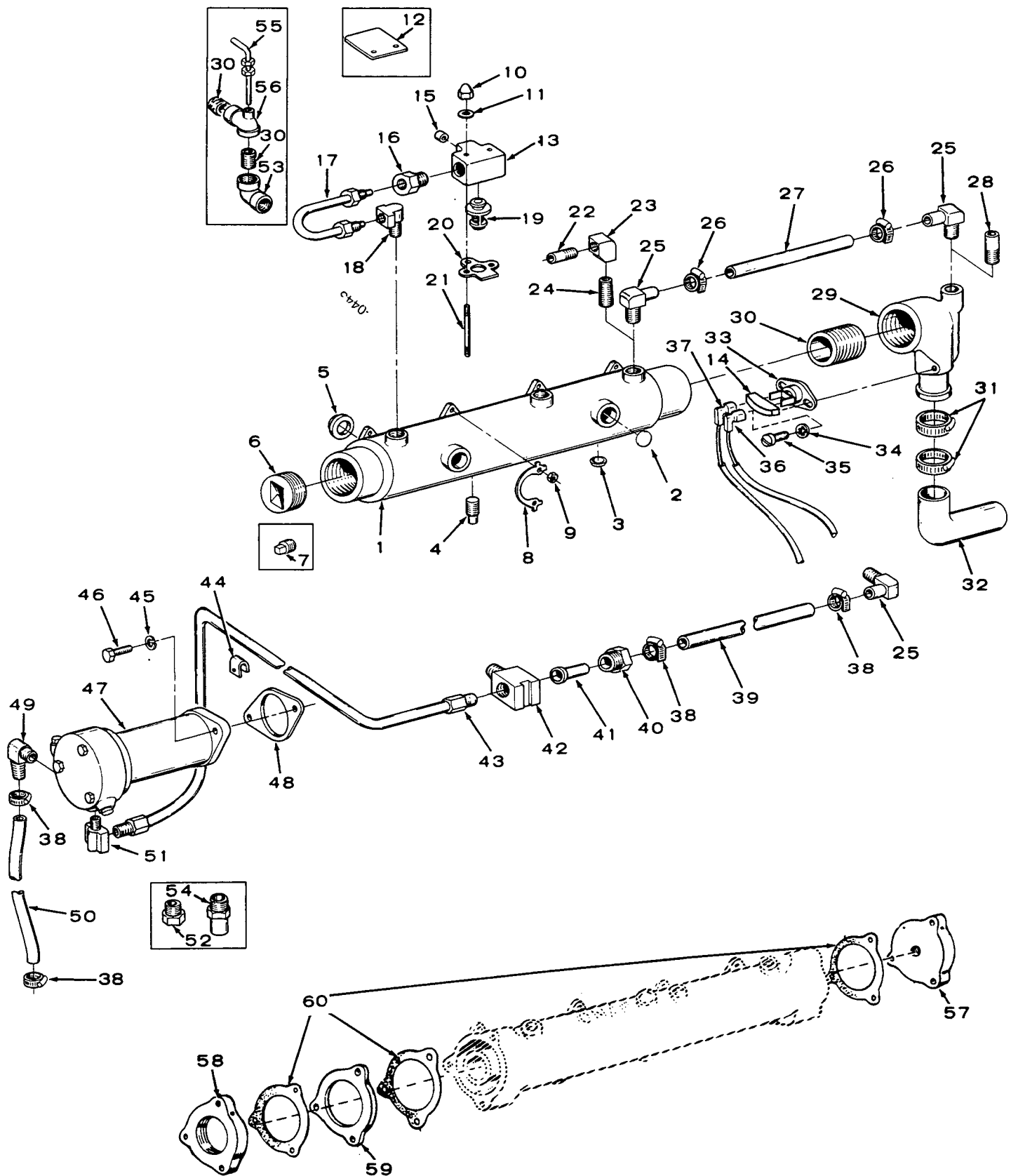
Cooling System



Cooling System

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	154-2124	1	Manifold Assembly, Exhaust (Includes Parts Marked *)	34	854-0008	2	Washer, Lock - IT (#6) Use Began During Spec AB (Sets Without Shield)
2	517-0041	4	*Plug, Welch (1-1/8" OD)	35	SCREW, MACHINE - BINDING HEAD (Begin Spec AB) 815-0410	2	Sets Without Shield (6-32 x 1/4")
3	517-0059	1	*Plug, Welch (1-7/16" OD)			2	Sets With Shield (6-32 x 5/16")
4	PLUG, EXHAUST MANIFOLD (3/8")			36	336-7571	1	Lead - Exhaust Switch to Cylinder Head Switch (13-1/2") Use Began During Spec AB
	505-0110	1	Pipe - Sets Without Heat Exchanger				
			Sets With Heat Exchanger	37	336-7572	1	Lead - Exhaust Switch to Control (25") Use Began During Spec AB
	505-0266	1	*Pipe - Spec A through T				
	502-0155	1	Brass - Begin Spec U	38	503-0183	4	Clamp, Hose
5	154-1057	4	Gasket, Exhaust Manifold			39	503-0394
6	505-0950	1	Plug, Exhaust Manifold - Countersunk (1-1/2")	40	502-0239	1	Nut, Inverted
7	502-0080	1	Plug, Square Head (Brass) (1/8") Used on some Early Models	41	130-0533	1	Adapter, Hose
8	154-1665	4	Tab, Lock	42	502-0247	1	Tee, Male
9	110-0445	8	Nut, Hex (Special)	43	LINE, WATER - PUMP TO BLOCK		
10	869-0002	4	Nut, Acorn (5/16-24)		130-0509	1	Spec A through C
11	526-0022	4	Washer, Flat (21/64" ID x 9/16" OD x 1/16" Thk)		130-0628	1	Begin Spec D
12	309-0154	1	Cover, Switch - Used on Early Models	44	130-0511	1	Clamp, Water Line
13	COVER, THERMOSTAT			45	WASHER, LOCK - SPRING (1/4")		
	309-0160	2	Sets Without Keel Cooling		850-0040	2	#Sets Without Heat Exchanger
	309-0161	2	Sets With Keel Cooling	46	850-0038	2	+Sets With Heat Exchanger
14	309-0501	1	Shield, Switch (Use Began During Spec AB)			SCREW (1/4-20 x 7/8") 800-0006	2
15	505-0274	2	Plug, Pipe (1/8")		802-0035	2	+Socket Head - Sets With Heat Exchanger
16	502-0103	2	Connector, Inverted Male	47	PUMP KIT, WATER (SEA WATER) 131-0267	1	Sets Without Heat Exchanger - All Specs (Includes 131-0152 Pump and Parts Marked #) This Kit Replaces 132-0059 Pump Used Spec A through C (See Separate Groups for Components for these Water Pumps) NOTE: Spec A through C also order Pump to Block Water Line 130-0628
17	130-0510	2	Line, Water				
18	502-0074	2	Elbow, Inverted Male				Sets With Heat Exchanger Spec A through T (Includes 131-0152 Pump and Parts Marked #) This Kit Replaces 132-0059 Pump Used Spec A through C (See Separate Groups for Components for these Water Pumps)
19	309-0130	2	Thermostat			1	Begin Spec U (Includes 132-0147 Pump and Parts Marked +) This Kit Replaces 132-0115 Pump Used Begin Spec U through Serial Number 0675975282 During Spec AA Until Use of 132-0147 Pump Begin Serial Number 0675975283 During Spec AA. The 132-0115 is Identified by a Bushing Cavity in the End Cover; 132-0147 has a Flat End Cover (See Separate Groups for Components for these Water Pumps)
20	309-0145	2	Gasket, Cover				
21	520-0143	4	Stud, Thermostat Cover				
22	502-0258	1	Nipple, Half (3/8") Sets With Keel Cooling				
23	502-0263	1	Elbow, Brass - 90° (3/8") Sets With Keel Cooling				
24	502-0085	1	Nipple, Close - 3/8" (Brass) Sets With Keel Cooling				
25	502-0237	3	Elbow, Hose - 90° (Brass)				
26	503-0547	2	Clamp, Hose - Sets Without Heat Exchanger or Keel Cooling		131-0267	1	
27	503-0084	1	Hose, Water (1/2" x 6") Sets Without Heat Exchanger or Keel Cooling				
28	502-0803	1	Nipple, Half (3/8" x 1-1/2") Sets With Heat Exchanger - Use Began During Spec AB				
29	155-1059	1	Elbow, Exhaust		132-0251	1	
30	NIPPLE, CLOSE (1-1/2")						
	505-0194	2	Early Models				
	505-0194	1	Late Models				
31	503-0465	2	Clamp, Hose				
32	ELBOW, EXHAUST HOSE						
	503-0576	1	Sets Without Heat Exchanger				
			Sets With Heat Exchanger				
	503-0576	1	Spec A though Z				
	503-0984	1	Begin Spec AA				
33	SWITCH, HIGH EXHAUST TEMPERATURE (Use Began During Spec AB)						
	309-0420	1	Normally Closed - Sets Without High Temperature Indicator Lamp	48	131-0127	1	#+Gasket, Water Pump
	309-0484	1	Normally Open - Sets With High Temperature Indicator Lamp	49	502-0304	1	Elbow, Hose - Pump Inlet (Also Replaces Keel Cooled Spec A through C Inlet Fittings)

Cooling System

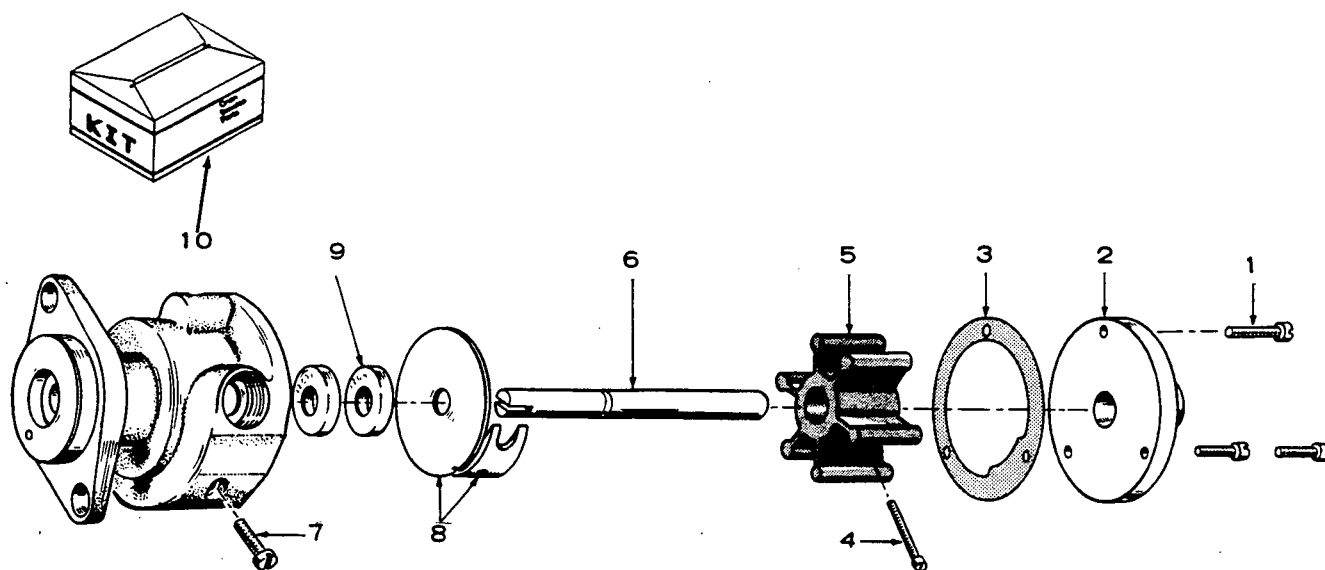


Cooling System

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
50	503-0586	1	Hose, Intake - Sea Water Pump (1/2" x 36")	53	505-0494	1	Elbow, Pipe, (1-1/2" x 90°) Early Models
51	ELBOW - Water Pump Outlet 502-0076	1	Sets Without Heat Exchanger (Inverted Male) Sets With Heat Exchanger Begin Spec S through Portion of Spec AB (Hose Elbow)	54	502-0370	1	Adapter, Hose - Pump Inlet (Sets With Heat Exchanger Begin Spec S)
	502-0237	1	Use Began During Spec AB (Hose Elbow)	55	154-0894	1	Tube Assembly, Water Injection - Early Models
	502-0300	1	Sets With Keel Cooling (Hose Elbow)	56	505-0486	1	Tee, Exhaust - Early Models
	502-0304	1		57	154-0709	1	Cap, Manifold - Spec A
52	BUSHING, REDUCER - Pump Outlet (Sets With Heat Exchanger)			58	154-0743	1	Cap, Manifold - Spec A
	502-0372	1	Spec U through Portion of Spec AB (3/4" to 3/8")	59	154-0811	1	Plate, Manifold - Spec A
	502-0798	1	Use Began During Spec AB (3/4" to 1/2")	60	154-0711	3	Gasket, Manifold - Spec A

- * - Parts Included in 154-2124 Exhaust Manifold Assembly
- # - Parts Included in 131-0267 Water Pump Kit
- + - Parts Included in 132-0251 Water Pump Kit

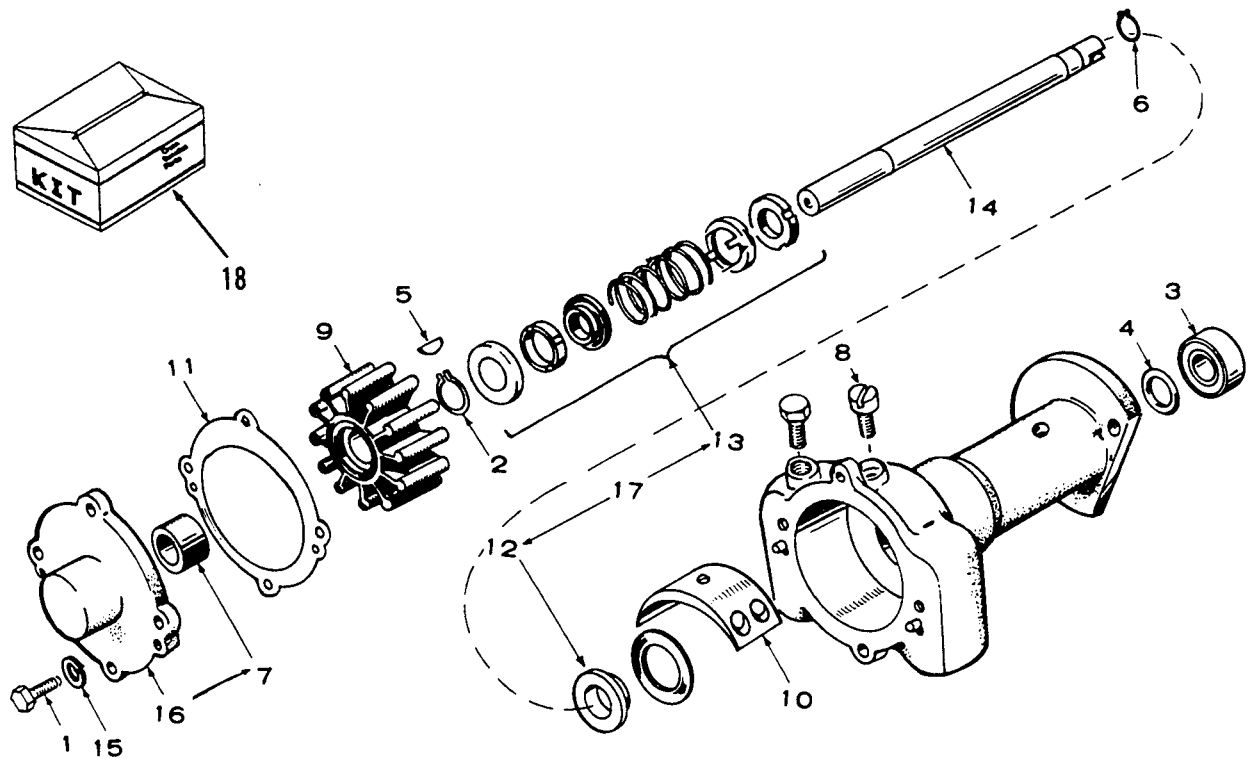
Water Pump Components (132-0059)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	132-0062	3	Screw, Machine - Fillister Head
2	132-0066	1	Cover, Water Pump
3	132-0068	1	*Gasket, Cover
4	132-0065	1	*Screw, Machine - Fillister Head
5	132-0064	1	*Impeller, Water Pump
6	132-0060	1	Shaft, Water Pump
7	132-0062	1	Screw, Machine - Fillister Head
8	132-0061	1	Plate Assembly, Cam
9	132-0063	2	*Seal, Water (Only One Seal Included in Repair Kit)
10	132-0069	1	Kit, Repair (Includes Parts Marked *)

* - Parts Included in 132-0069 Water Pump Repair Kit.

Water Pump Components (132-0115)

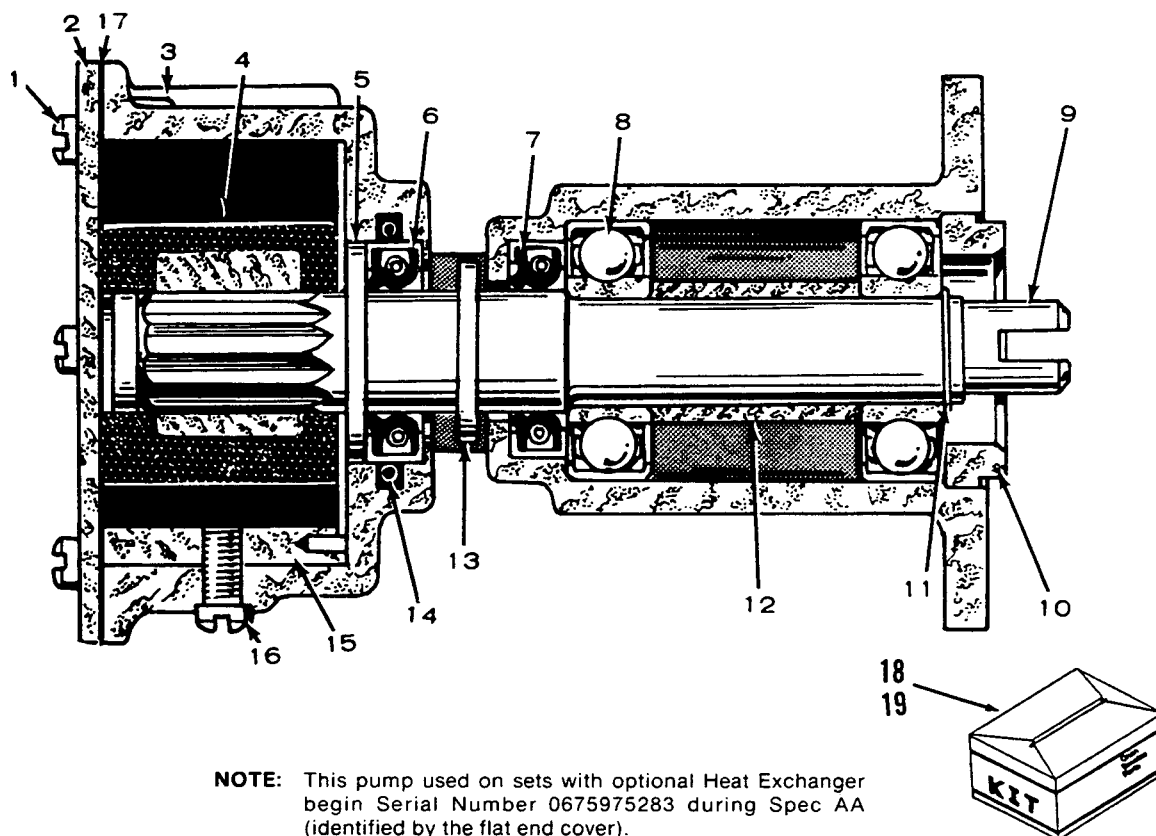


NOTE: This pump used on sets with optional Heat Exchanger begin Spec U through Serial Number 0675975282 during Spec AA (identified by bushing cavity in the end cover).

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	800-1003	4	Screw, Cap - Hex Head (1/4-20 x 1/2")	8	132-0124	1	Screw, Cam
2	132-0119	1	Ring, Retainer - Seat and Seal	9	132-0117	1	*Impeller
3	132-0120	1	*Bearing, Ball	10	132-0125	1	*Cam
4	132-0121	1	Slinger	11	132-0118	1	*Gasket, Cover
5	515-0248	1	*Key	12	132-0126	1	*Seat
6	132-0122	1	Ring, Retainer - Drive End	13	132-0127	1	*Seal
7	132-0123	1	*Bushing	14	132-0128	1	Shaft
				15	850-0040	4	Washer, Lock - Spring (1/4")
				16	132-0129	1	Cover, End (Includes Bushing)
				17	132-0130	1	Seat and Seal Package
				18	132-0116	1	Repair Package, Water Pump (Includes Parts Marked *)

* - Parts Included in 132-0116 Repair Package

Water Pump Components (132-0147)



NOTE: This pump used on sets with optional Heat Exchanger begin Serial Number 0675975283 during Spec AA (identified by the flat end cover).

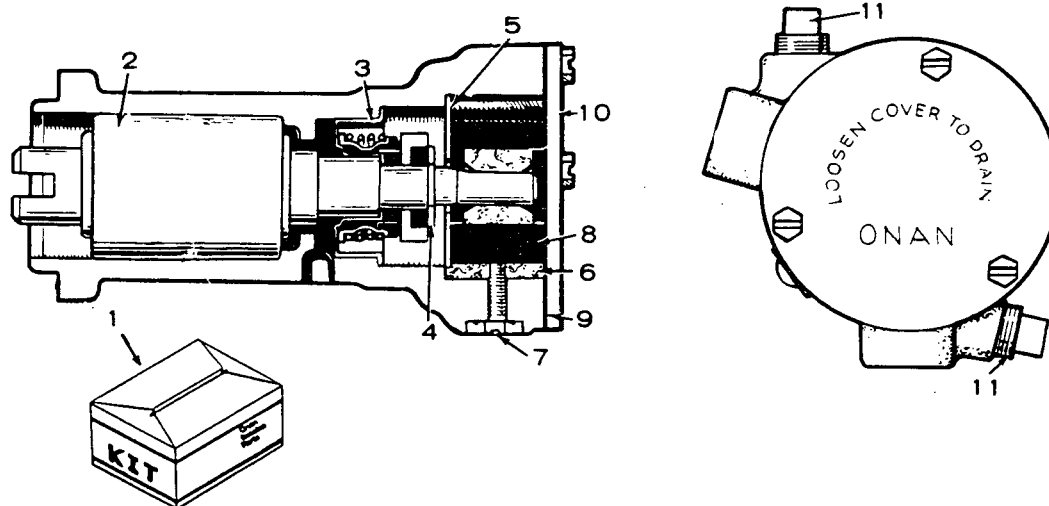
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	132-0165	6	Screw, Fillister Head
2	132-0164	1	Cover, End
3	132-0163	1	Body
4	132-0162	1	*Impeller (Includes Spline Seal)
5	132-0161	1	Spacer, Seal
6	132-0160	1	*Seal
7	132-0159	1	Seal

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
8	132-0158	2	Bearing, Ball
9	132-0157	1	Shaft
10	132-0156	1	Ring, Adapter
11	132-0155	1	Ring, Retaining - External
12	132-0154	1	Spacer, Bearing
13	132-0153	1	Slinger
14	132-0152	1	*Ring, "O"
15	132-0258	1	#Cam and Wearplate Assembly
16	132-0257	1	#Screw, Fillister Head
17	132-0256	1	*#Gasket
18	132-0148	1	Repair Package, Water Pump (Includes Parts Marked *)
19	132-0259	1	Repair Kit, Cam and Wearplate (Includes Parts Marked #)

* - Parts Included in 132-0148 Repair Package

- Parts Included in 132-0259 Cam and Wearplate Repair Kit

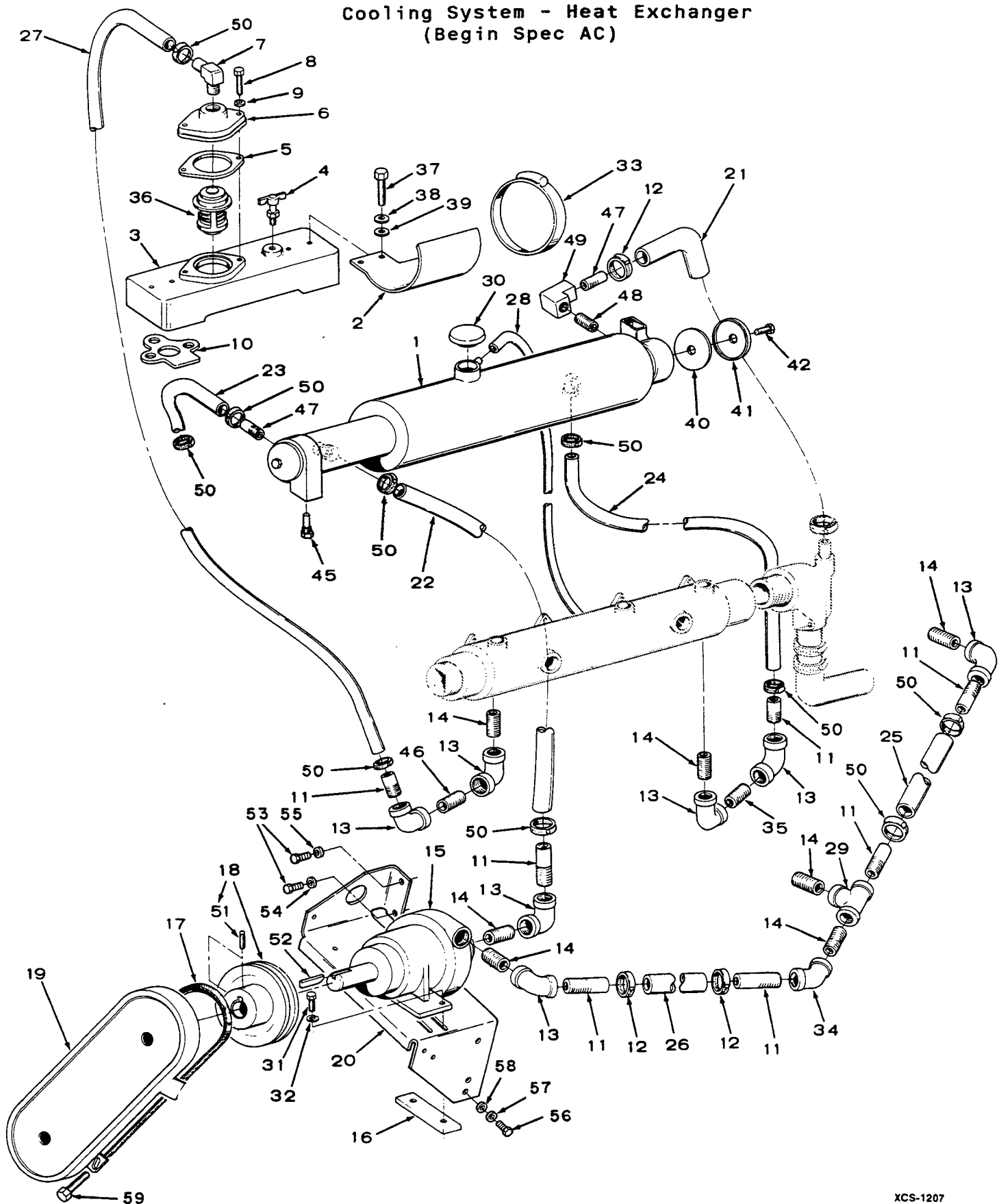
Water Pump Components (131-0152)



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	131-0179	1	Repair Kit, Water Pump (Includes Parts Marked *)
2	131-0268	1	Bearing and Shaft Assembly
3	131-0157	1	*Seal Assembly
4	518-0221	1	*Ring, Retaining
5	131-0158	1	*Wearplate - Rear
6	131-0159	1	*Cam
7	815-0283	4	*Screw, Machine - Slotted Hex Head (Brass) (#8-32 x 1/2") One Screw Included in Repair Kit
8	131-0160	1	*Impeller
9	131-0161	1	*Gasket, Cover
10	131-0162	1	*Cover
11	502-0080	2	Plug, Square Head (1/8")

* - Parts Included in 131-0179 Repair Kit

Cooling System - Heat Exchanger (Begin Spec AC)



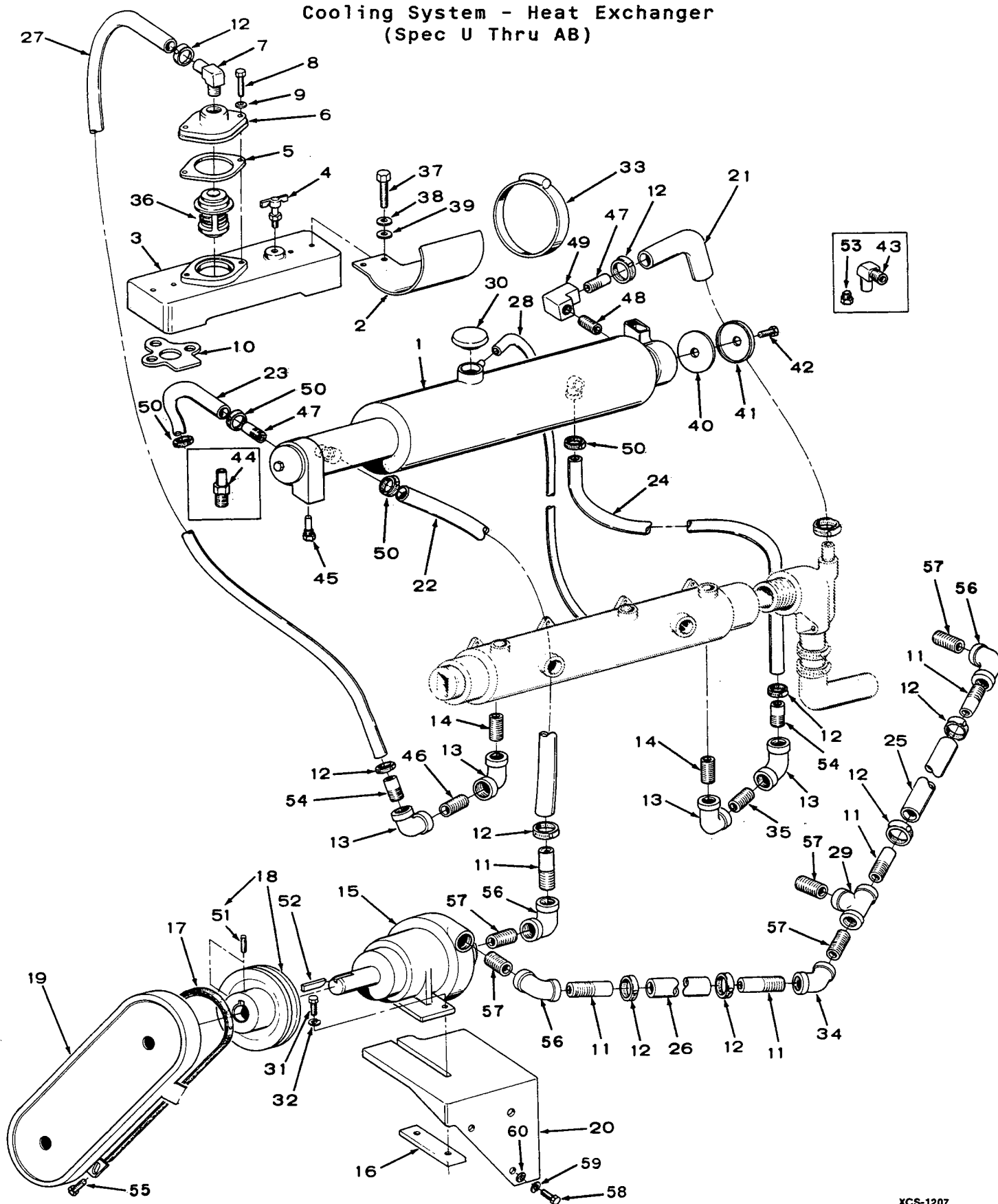
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Cooling System - Heat Exchanger **(Begin Spec AC)**

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	130-1189	1	Exchanger, Heat (Includes Parts Marked #)	30	130-0589	1	#Cap, Pressure
2	130-0910	2	Bracket, Heat Exchanger	31	800-0006	2	Screw, Cap - Hex Head (1/4-20 x 7/8")
3	MANIFOLD, WATER			32	850-0040	2	Washer, Lock - Spring (1/4")
	131-0196	1	Sets Without Electrical Water Temperature Sender	33	503-1180	2	Clamp, Heat Exchanger Mounting
	131-0137	1	Sets With Electrical Water Temperature Sender	34	505-0376	1	Elbow, Pipe (45° x 3/8")
4	504-0006	1	Valve, Drain	35	505-0277	1	Nipple, Pipe (3/8" x 1-1/2")
5	131-0140	1	Gasket, Water Manifold Outlet	36	309-0054	1	Thermostat
6	131-0197	1	Housing, Thermostat	37	800-0036	4	Screw, Cap - Hex Head (5/16-18 x 2-3/4")
7	502-0300	1	Elbow, Hose	38	526-0122	4	Washer, Flat (11/32" ID x 23/32" OD x 1/8" Thk)
8	800-0030	2	Screw, Cap - Hex Head (5/16-18 x 1-1/4")	39	526-0113	4	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)
9	526-0065	2	Washer, Flat - Copper (21/64" ID x 9/16" OD x 1/16" Thk)	40	130-0959	2	#Gasket, End Cover
10	309-0145	2	Gasket, Water Manifold	41	130-1031	2	#Cover, End
11	505-0135	7	Nipple, Half (3/8" x 1-1/2")	42	815-0300	2	#Screw, Cap - Hex Head (Brass) (5/16-18 x 1/2")
12	503-0183	3	Clamp, Hose	45	130-1340	1	#Pencil, Zinc
13	505-0039	7	Elbow, Pipe (3/8" x 90°)	46	505-0139	1	Nipple, Pipe (3/8" x 2")
14	505-0101	7	Nipple, Pipe - Close (3/8")	47	502-0803	2	Nipple, Half (Sea Water Inlet and Outlet on Heat Exchanger)
15	132-0110	1	Pump, Water (Captive Water) See Separate Group for Components	48	502-0085	1	Nipple, Close - Sea Water Outlet on Heat Exchanger
16	131-0130	1	Bar, Water Pump Holddown	49	502-0263	1	Elbow (90°) Sea Water Outlet on Heat Exchanger
17	511-0067	1	Belt, Water Pump	50	503-0382	10	Clamp, Hose
18	132-0252	1	Pulley Kit (Includes Set Screws)	51	803-0062	2	Screw, Set
19	130-0920	1	Guard, Belt	52	515-0249	1	Key - Pulley to Water Pump
20	131-0362	1	Bracket, Water Pump	53	800-0050	2	*Screw, Cap - Hex Head (3/8-16 x 1") One Used in Cylinder Block Wet Hole
21	503-1080	1	Elbow, Hose (90°) Sea Water Outlet on Heat Exchanger to Exhaust Elbow (5/8" ID)	54	526-0066	1	*Washer, Flat - Copper (3/8") Wet Hole
22	503-0711	1	Hose, Water - Heat Exchanger to Captive Water Pump Inlet (3/4" ID x 6-1/2")	55	850-0050	1	Washer, Lock-Spring (3/8")
23	503-1079	1	Hose, Water - Sea Water Pump to Heat Exchanger (3/4" ID x 28")	56	800-0026	2	Screw, Cap - Hex Head (5/16-18 x 3/4")
24	503-0438	1	Hose, Water - Exhaust Manifold to Heat Exchanger (3/4" ID x 5-1/4")	57	850-0045	2	Washer, Lock-Spring (5/16")
25	503-0478	1	Hose, Water - No. 1 and 2 Cylinders to No. 3 and 4 Cylinders (3/4" ID x 9")	58	526-0113	2	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)
26	503-0472	1	Hose, Water - Water Pump Outlet to Block (3/4" ID x 6")	59	821-0010	3	Screw, Locking Head Flange (1/4-20 x 1/2")
27	503-0699	1	Hose, Water - Water Manifold to Exhaust Manifold (3/4" ID x 16")				
28	503-0492	1	Hose, Overflow (26")				
29	505-0060	1	Tee, Pipe (3/8")				

- Parts Included in 130-1189 Heat Exchanger
* - See Cylinder Block Group for other Related Wet Hole Hardware

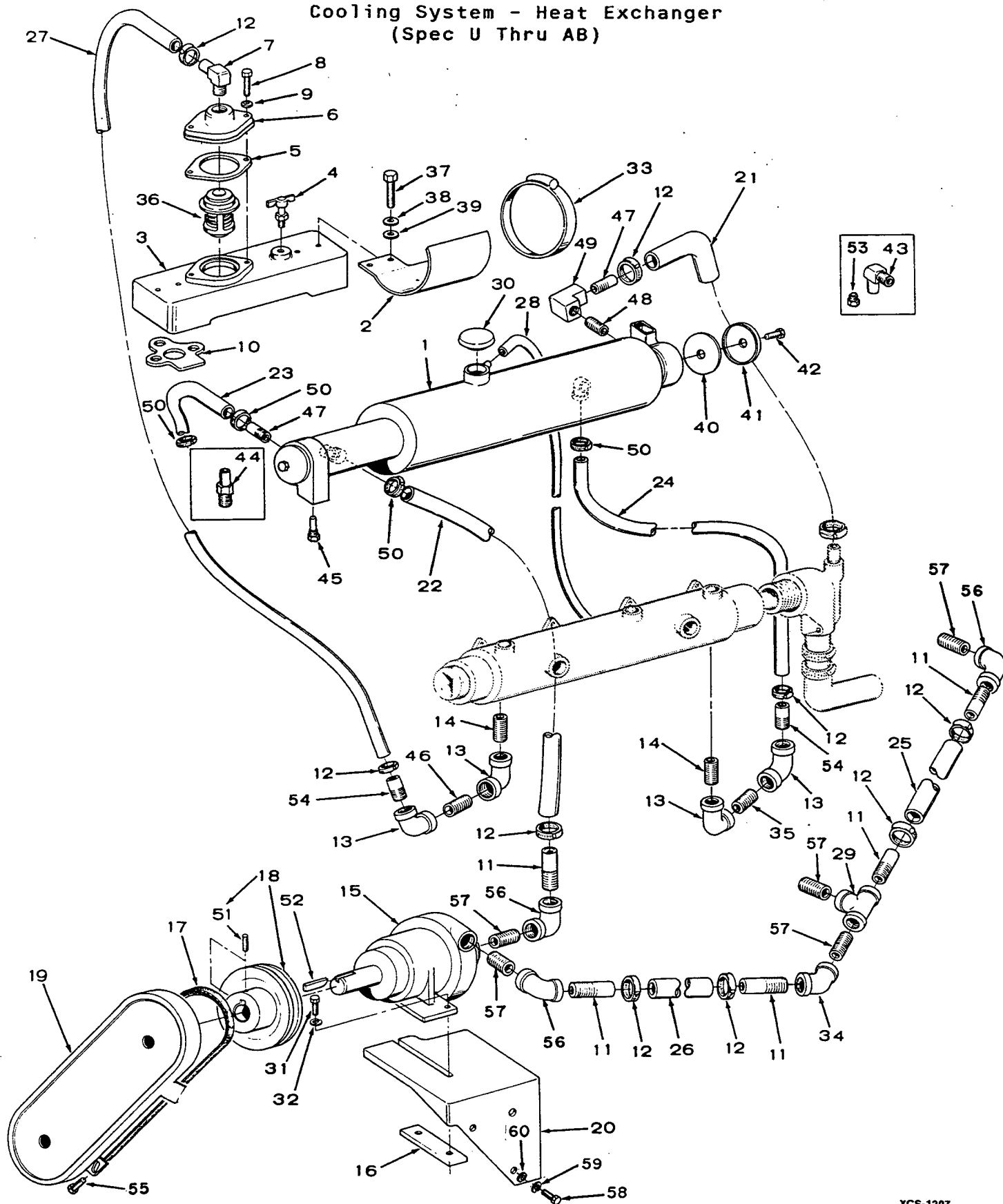
Cooling System - Heat Exchanger (Spec U Thru AB)



Cooling System - Heat Exchanger (Spec U Thru AB)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	EXCHANGER, HEAT 130-1337	1	Spec U through Serial Number L770286361 During Spec AA (Replacement Kit) (Includes Hose Connectors, Clamps, Hoses and Part Marked *)	24	503-0438	1	Hose, Water - Exhaust Manifold to Heat Exchanger (3/4" ID x 5-1/4")
	130-1189	1	*Begin Serial Number L770286362 During Spec AA (Includes Parts Marked #)	25	503-0478	1	Hose, Water - No. 1 and 2 Cylinders to No. 3 and 4 Cylinders (3/4" ID x 9")
2	130-0910	2	Bracket, Heat Exchanger	26	503-0472	1	Hose, Water - Water Pump Outlet to Block (3/4" ID x 6")
3	MANIFOLD, WATER 131-0196	1	Sets Without Electrical Water Temperature Sender	27	503-0699	1	Hose, Water - Water Manifold to Exhaust Manifold (3/4" ID x 16")
	131-0137	1	Sets With Electrical Water Temperature Sender	28	503-0492	1	Hose, Overflow (26")
4	504-0006	1	Valve, Drain	29	TEE, PIPE (3/8")	1	Spec U through Z (Brass)
5	131-0140	1	Gasket, Water Manifold Outlet		502-0257	1	Begin Spec AA (Steel)
6	131-0197	1	Housing, Thermostat		505-0060	1	*#Cap. Pressure
7	502-0300	1	Elbow, Hose	30	130-0589	1	
8	800-0030	2	Screw, Cap - Hex Head (5/16-18 x 1-1/4")	31	800-0006	2	Screw, Cap - Hex Head (1/4-20 x 7/8")
9	526-0065	2	Washer, Flat - Copper (21/64" ID x 9/16" OD x 1/16" Thk)	32	850-0040	2	Washer, Lock - Spring (1/4")
10	309-0145	2	Gasket, Water Manifold	33	503-1180	2	Clamp, Heat Exchanger Mounting
11	NIPPLE, HALF (3/8") 502-0258	5	Spec U through Z (Brass)	34	ELBOW, PIPE (45° - 3/8")	1	Spec U through Z (Brass)
	505-0135	5	Begin Spec AA (Steel)		502-0298	1	Begin Spec AA (Steel)
12	CLAMP, HOSE 503-0183	11	Spec U through Portion of Spec AB	35	505-0277	1	Nipple, Pipe (3/8" x 1-1/2")
	503-0183	11	Use Began During Spec AB	36	309-0054	1	Thermostat
13	505-0039	4	Elbow, Pipe (3/8" x 90°)	37	800-0036	4	Screw, Cap - Hex Head (5/16-18 x 2-3/4")
14	505-0101	2	Nipple, Pipe - Close (3/8")	38	526-0122	4	Washer, Flat (11/32" ID x 23/32" OD x 1/8" Thk)
15	PUMP, WATER (CAPTIVE WATER) 132-0262	1	Sets With Flat Area on Water Pump Shaft (Replacement Kit - Includes 132-0110 Water Pump and Parts Marked +) See Separate Group for Components	39	526-0113	4	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)
	132-0110	1	Sets With Keyed Area on Water Pump Shaft - See Separate Group for Components	40	GASKET, END COVER 130-0959	1	Spec U through Serial Number L770286361 During Spec AA
16	131-0130	1	Bar, Water Pump Holddown		130-0959	2	*#Begin Serial Number L770286362 During Spec AA
17	511-0067	1	Belt, Water Pump	41	COVER, END 130-1007	1	Spec U through Serial Number L770286361 During Spec AA
18	PULLEY KIT, WATER PUMP (Includes Set Screws) 512-0134	1	Sets With Flat Area on Water Pump Shaft		130-1031	2	*#Begin Serial Number L770286362 During Spec AA
	132-0252	1	+Sets With Keyed Area on Water Pump Shaft	42	SCREW, CAP - HEX HEAD (BRASS) (5/16-18 x 1/2")	1	Spec U through Serial Number L770286361 During Spec AA
19	130-0920	1	Guard, Belt		815-0300	2	*#Begin Serial Number L770286362 During Spec AA
20	131-0199	1	Bracket, Water Pump		815-0300	2	*#Begin Serial Number L770286362 During Spec AA
21	ELBOW, HOSE (90°) Sea Water Outlet on Heat Exchanger to Exhaust Elbow 503-0777	1	Spec U through Portion of Spec AB (5/8" ID)	43	502-0302	1	Elbow, Hose (90°) Sea Water Outlet on Heat Exchanger - Use Began Serial Number L770286362 During Spec AA through Portion of Spec AB (3/8" x 1/2" Hose)
	503-1080	1	Use Began During Spec AB (5/8" ID)	44	502-0238	1	Adapter, Hose - Sea Water Inlet on Heat Exchanger - Use Began Serial Number L770286362 During Spec AA through Portion of Spec AB
22	503-0711	1	Hose, Water - Heat Exchanger to Captive Water Pump Inlet (3/4" ID x 6-1/2")	45	130-1340	1	*#Pencil, Zinc
23	HOSE, WATER - Sea Water Pump to Heat Exchanger 503-0712	1	Spec U through Portion of Spec AB (5/8" ID x 28")	46	NIPPLE, PIPE 505-0277	1	Spec U through Portion of Spec AB (3/8" x 1-1/2")
	503-1079	1	Use Began During Spec AB (3/4" ID x 28")		505-0139	1	Use Began During Spec AB (3/8" x 2")
				47	502-0803	2	Nipple, Half - Sea Water Inlet and Outlet on Heat Exchanger - Use Began During Spec AB

Cooling System - Heat Exchanger (Spec U Thru AB)

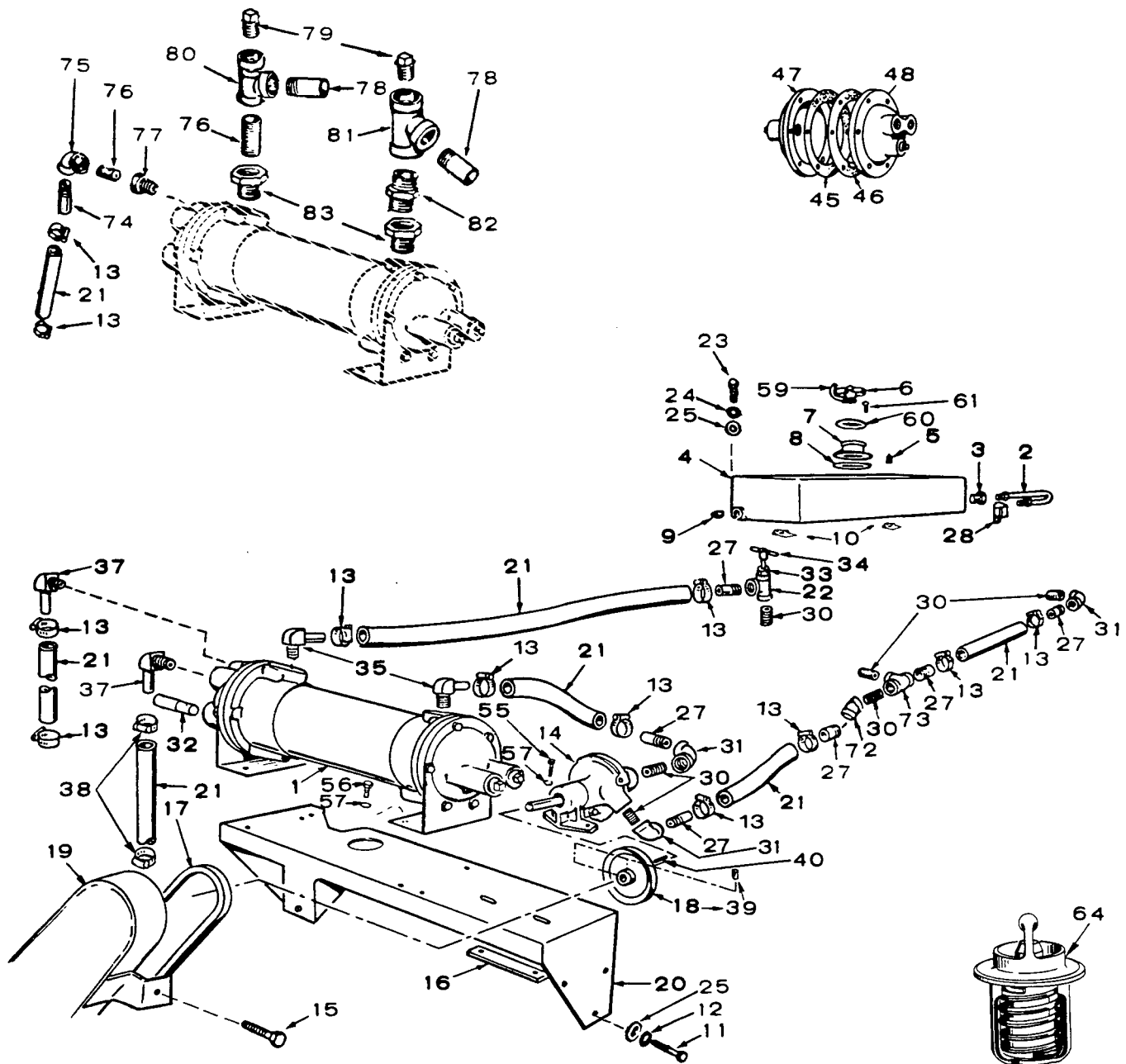


Cooling System - Heat Exchanger (Spec U Thru AB)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
48	502-0085	1	Nipple, Close - Sea Water Outlet on Heat Exchanger - Use Began During Spec AB	54	505-0135	2	Nipple, Half (3/8" x 1-1/2")
49	502-0263	1	Elbow (90°) Sea Water Outlet on Heat Exchanger - Use Began During Spec AB	55	821-0018	3	Screw, Locking Head Flange (1/4-20 x 5/8")
50	CLAMP, HOSE 503-0183	4	Spec U through Portion of Spec AB	56	ELBOW, PIPE (3/8" - 90°) 502-0263	3	Spec U through Z (Brass)
51	SCREW, SET 803-0062	4	Use Began During Spec AB	57	505-0039	3	Begin Spec AA (Steel)
		1	Sets With Flat Area on Water Pump Shaft	57	NIPPLE, CLOSE (3/8") 502-0085	5	Spec U through Z (Brass)
	803-0062	2	+Sets With Keyed Area on Water Pump Shaft		505-0101	5	Begin Spec AA (Steel)
52	515-0249	1	+Key, Pulley to Water Pump	58	800-0512	2	Screw, Cap - Hex Head (Special)
53	502-0308	1	Plug, Pipe - Hex Head (1/8") Spec U through Serial Number L770286361 During Spec AA	59	850-0045	2	Washer, Lock-Spring (5/16")
				60	526-0113	2	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)

- * - Parts Included in 130-1337 Heat Exchanger Kit
- # - Parts Included in 130-1189 Heat Exchanger
- + - Parts Included in 132-0262 Water Pump Replacement Kit

Cooling System - Heat Exchanger (Spec A Thru T)



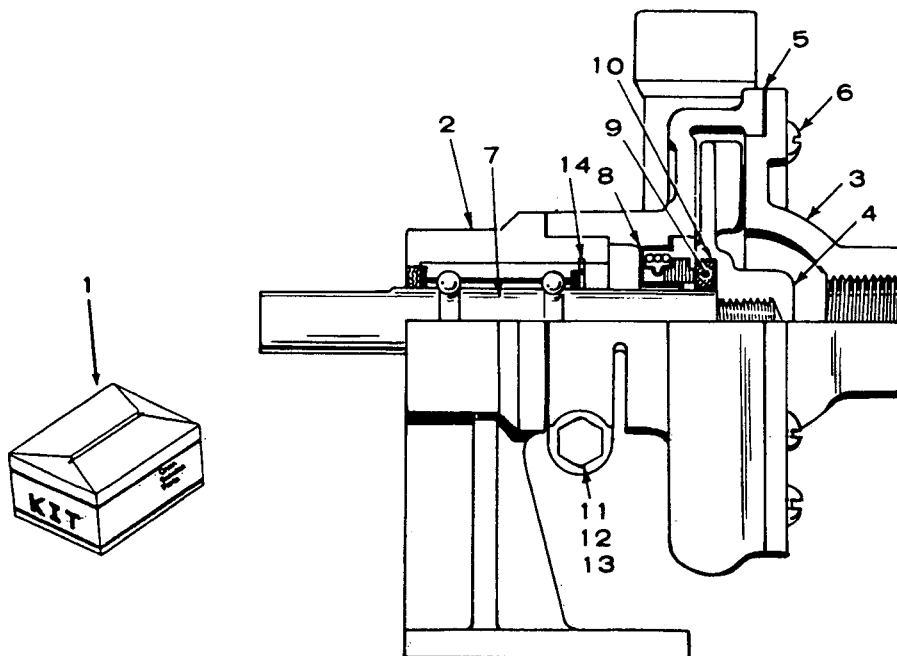
Cooling System - Heat Exchanger (Spec A Thru T)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	132-0080	1	Repair Kit, Water Pump — Kit Applies to Captive Water Pumps 132-0070 (Oberdorfer Model IGP #50-P9) and 132-0095 (Oberdorfer Model IGP #50-P11) (Kit Includes Wear Ring, Seals, Cover Gaskets and Screws, Shaft and Bearing Assembly and Impeller)	23	800-0036	4	Screw, Cap - Hex Head (5/16-18 x 2-3/4")
1	130-0624	1	Exchanger, Heat — Begin Spec C (Replaces Heat Exchanger Used During Spec A and B) Includes Parts Marked *	24	526-0122	4	Washer, Flat (11/32" ID x 23/32" OD x 0.1345" Thk)
2	130-0575	1	Line, Water — Expansion Tank to Exhaust Manifold	25	526-0113	6	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)
3	502-0103	1	Connector, Inverted Male- Expansion Tank Outlet	27	502-0258	6	Nipple, Half-brass (3/8" x 2")
4	130-0574	1	Tank, Expansion	28	502-0074	1	Elbow, Inverted Male
5	502-0080	2	Plug, Expansion Tank Fill Vent	30	502-0085	6	Nipple, Close
6	130-0589	1	Cap, Pressure	31	502-0263	3	Elbow, Pipe - Brass (3/8" x 90°)
7	130-0590	1	Neck and Adapter, Expansion Tank Cap	32	130-1340	2	*Pencil, Zinc
8	130-0519	1	Gasket, Neck and Adapter	33	502-0049	1	Bushing, Reducer - Brass (3/8" x 1/8")
9	502-0155	1	Plug (3/8")	34	504-0006	1	Valve, Air Bleed - Manifold Outlet
10	309-0145	2	Gasket, Thermostat Chamber	35	502-0300	2	Elbow, Brass - Heat Exchanger Captive Water Hoses
11	800-0512	2	Screw, Cap-Hex Head (Special)	37	502-0237	2	Elbow, Hose - Brass (Begin Spec C)
12	850-0045	2	Washer, Lock-Spring (5/16")	38	503-0446	2	Clamp, Hose - Sea Water Pump to Heat Exchanger
13	503-0183	10	Clamp, Hose	39	SCREW, SET 803-0062	1	Sets With Flat Area on Water Pump Shaft
14	PUMP, WATER (Captive Water) Begin Spec D				803-0062	2	#Sets With Keyed Area on Water Pump Shaft
	132-0262	1	Sets With Flat Area on Water Pump Shaft (Replacement Kit). This Kit Also Replaces 132-0070 (Early Spec A) Water Pump and 132-0095 (Late Spec A through C) Water Pump (Kit Includes 132-0110 Pump and Parts Marked #)	40	515-0249	1	#Key - Pulley to Water Pump
	132-0110	1	#Sets With Keyed Area on Water Pump Shaft (See Separate Group for Components)	45	130-0729	1	*Gasket - Heat Exchanger Captive Water End
15	821-0018	4	Screw, Locking Head Flange (1/4-20 x 5/8")	46	130-0730	1	*Gasket - Heat Exchanger Sea Water End
16	131-0130	1	Bar, Pump Holddown	47	130-0731	1	*Bonnet (Includes Gasket) Heat Exchanger Captive Water End
17	511-0067	1	Belt, Water Pump	48	130-0732	1	*Bonnet (Includes Gasket) Heat Exchanger Sea Water End
18	PULLEY KIT, WATER PUMP (Includes Set Screws)				SCREW, CAP - HEX HEAD		
	512-0134	1	Sets With Flat Area on Water Pump Shaft	55	800-0006	2	Water Pump Mounting (1/4-20 x 7/8")
	132-0252	1	#Sets With Keyed Area on Water Pump Shaft	56	800-0004	4	Heat Exchanger Mounting (1/4-20 x 5/8")
19	130-0591	1	Guard, Belt	57	WASHER, LOCK - SPRING (1/4")		
20	BRACKET, HEAT EXCHANGER				850-0040	2	Water Pump Mounting
	130-2171	1	Spec A through Q		850-0040	4	Heat Exchanger Mounting
	130-2167	1	Begin Spec R	59	503-0679	1	Hose, Overflow
21	HOSE, RUBBER			60	130-0892	1	Stiffener, Filler Neck
	503-0463	1	3/4" ID x 54" - Total Length Required for All Hoses Except Sea Water Pump Sea Water Pump to Heat Exchanger	61	821-0005	6	Screw, Locking Head (#10-32 x 1/2")
	503-0461	1	Spec A and B (3/4" ID x 13-1/4")	64	309-0054	1	Thermostat, Expansion Tank
	503-0285	1	Spec C through T (1/2" ID x 14")	72	502-0298	1	Elbow, Pipe (3/8" - 45°)
22	502-0257	1	Tee, Pipe - Brass (3/8")	73	502-0257	1	Tee, Pipe
				74	502-0258	2	Nipple, Half - Pipe (Spec A and B)
				75	502-0263	2	Elbow - Spec A and B
				76	502-0085	3	Nipple - Spec A and B
				77	505-0131	2	Reducer - Spec A and B
				78	502-0258	2	Nipple - Spec A and B
				79	502-0155	2	Plug - Spec A and B
				80	502-0257	1	Tee - Spec A and B
				81	502-0261	1	Y Pipe - Spec A and B
				82	502-0158	1	Nipple - Spec A and B
				83	505-0455	2	Reducer - Spec A and B

* - Parts Included in 130-0624 Heat Exchanger

- Parts Included in 132-0262 Water Pump Kit

Water Pump Components (132-0074)



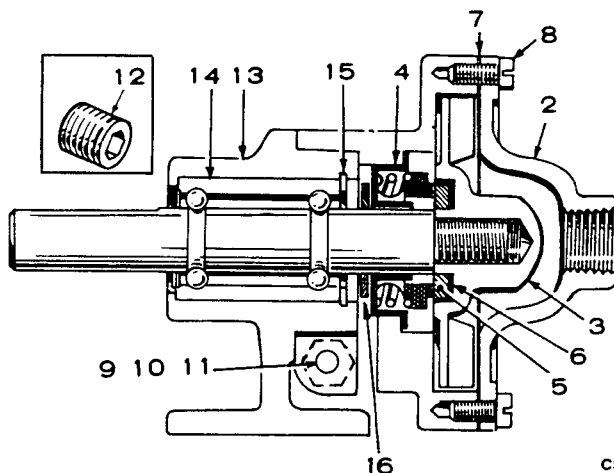
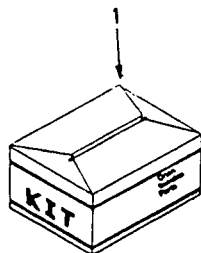
NOTE: This pump used on sets with keel cooling.

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	132-0093	1	Repair Kit (Includes Parts Marked *)
2	132-0143	1	Pedestal
3	132-0145	1	Cover, Pump
4	132-0087	1	Impeller
5	132-0088	1	*Gasket, Cover
6	810-0099	8	*Screw, Machine - Round Head Brass (#10-24 x 7/16")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
7	132-0089	1	*Shaft and Bearing Assembly
8	132-0101	1	*Seal, Mechanical
9	132-0091	1	*Ring, Seal Wear
10	132-0092	1	*Cap, Wear Ring
11	132-0138	1	Screw, Cap - Hex Head
12	132-0140	1	Nut, Hex
13	132-0139	1	Washer, Lock - Spring
14	132-0132	1	Ring, Snap

* - Parts Included in 132-0093 Repair Kit

Water Pump Components (132-0110)



CS-1057

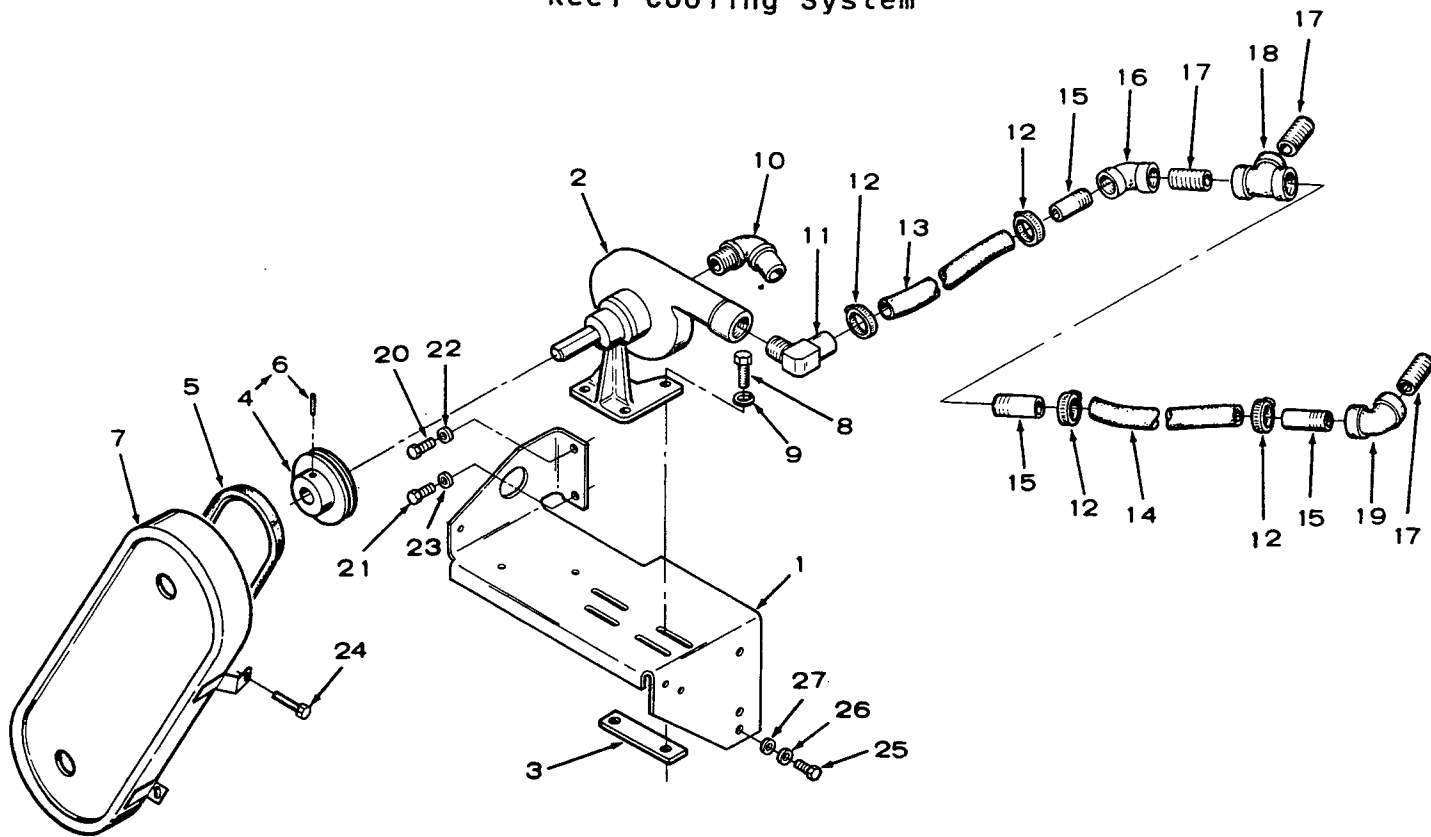
NOTE: This pump used on sets with heat exchanger.

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1			REPAIR KIT, WATER PUMP	10	132-0139	1	Lockwasher - Used on Early Style Pumps
	132-0241	1	Pumps With Flat Area on Shaft (Includes Water Pump Pulley, Set Screws, Key and Parts Marked *)	11	132-0140	1	Nut, Hex - Used on Early Style Pumps
	132-0240	1	Pumps With Keyed Area on Shaft (Includes Parts Marked #)	12	132-0141	1	Plug, Drain - Used on Early Style Pumps
2	132-0137	1	Cover, Pump	13	132-0142	1	Pedestal
3	132-0114	1	*#Impeller	14	SHAFT AND BEARING ASSEMBLY 132-0239	1	Pumps With Flat Area on Shaft (Repair Kit - Also Includes Water Pump Pulley, Set Screws and Key)
4	132-0101	1	*#Seal		132-0225	1	*#Pumps With Keyed Area on Shaft
5	132-0091	1	*#Face, Wear	15	132-0132	1	Ring, Snap
6	132-0092	1	*#Seat, Seal	16	132-0224	1	Slinger, Fiber
7	132-0112	1	*#Gasket, Cover				
8	132-0113	6	*#Screw, Cover				
9	132-0138	1	Screw, Cap - Used on Early Style Pumps				

* - Parts Included in 132-0241 Repair Kit.

- Parts Included in 132-0240 Repair Kit.

Keel Cooling System



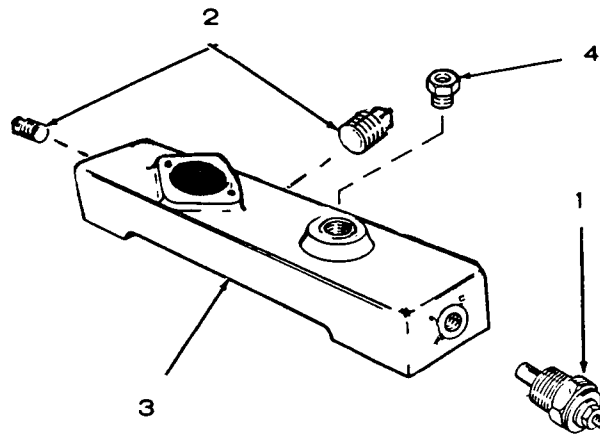
XCS-1202

NOTE: Early models used brass for the water inlet fittings, late models use pipe fittings.

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	BRACKET, MOUNTING			17	NIPPLE, CLOSE (3/8")		
	130-2171	1	Spec A through Q		502-0085	3	Brass
	130-2167	1	Spec R through AB		505-0101	3	Pipe
	131-0362	1	Begin Spec AC	18	TEE - 3/8"		
2	132-0074	1	Pump, Water (Captive Water) See Separate Group for Components		502-0257	1	Brass
3	131-0144	1	Bar, Pump Holddown		505-0060	1	Pipe
4	512-0134	1	Pulley Kit, Water Pump (Includes Set Screw)	19	ELBOW (3/8" - 90°)		
5	511-0068	1	Belt, Water Pump		502-0263	1	Brass
6	803-0062	1	Screw, Set		505-0039	1	Pipe
7	GUARD, BELT			20	800-0050	1	Screw, Cap - Hex Head (3/8-16 x 1") Begin Spec AC
	130-0591	1	Spec A through AB	21	800-0047	1	*Screw, Cap - Hex Head (3/8-16 x 5/8") Begin Spec AC
	130-0920	1	Begin Spec AC	22	850-0050	1	Washer, Lock - Spring (3/8") Begin Spec AC
8	800-0005	2	Screw, Cap - Hex Head (1/4-20 x 3/4")	23	526-0066	1	*Washer, Flat - Copper (25/64" ID x 9/16" OD x 1/16" Thk) Begin Spec AC
9	850-0040	2	Washer, Lock - Spring (1/4")	24	SCREW, LOCKING HEAD (FLANGE)		
10	502-0278	1	Elbow, Brass (90°) Pump Inlet		821-0018	4	Spec A through AB (1/4-20 x 5/8")
11	502-0300	1	Elbow, Brass (90°) Pump Outlet		821-0010	3	Begin Spec AC (1/4-20 x 1/2")
12	503-0183	4	Clamp, Hose	25	SCREW, CAP - HEX HEAD		
13	503-1194	1	Hose, Water (3/4" x 9")		800-0512	2	Spec A through AB (5/16-18 x 1")
14	503-1194	1	Hose, Water Inlet (3/4" x 9")		800-0026	2	Begin Spec AC (5/16-18 x 3/4")
15	NIPPLE, HALF			26	850-0045	2	Washer, Lock-Spring (5/16")
	502-0258	3	Brass (3/8" x 2")	27	526-0113	2	Washer, Flat (11/32" ID x 1" OD x 3/32" Thk)
16	ELBOW (3/8" - 45°)						
	502-0298	1	Brass				
	505-0376	1	Pipe				

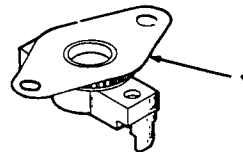
* - See Cylinder Block Group for other Related Wet Hole Hardware

Water Manifold and Temperature Sender



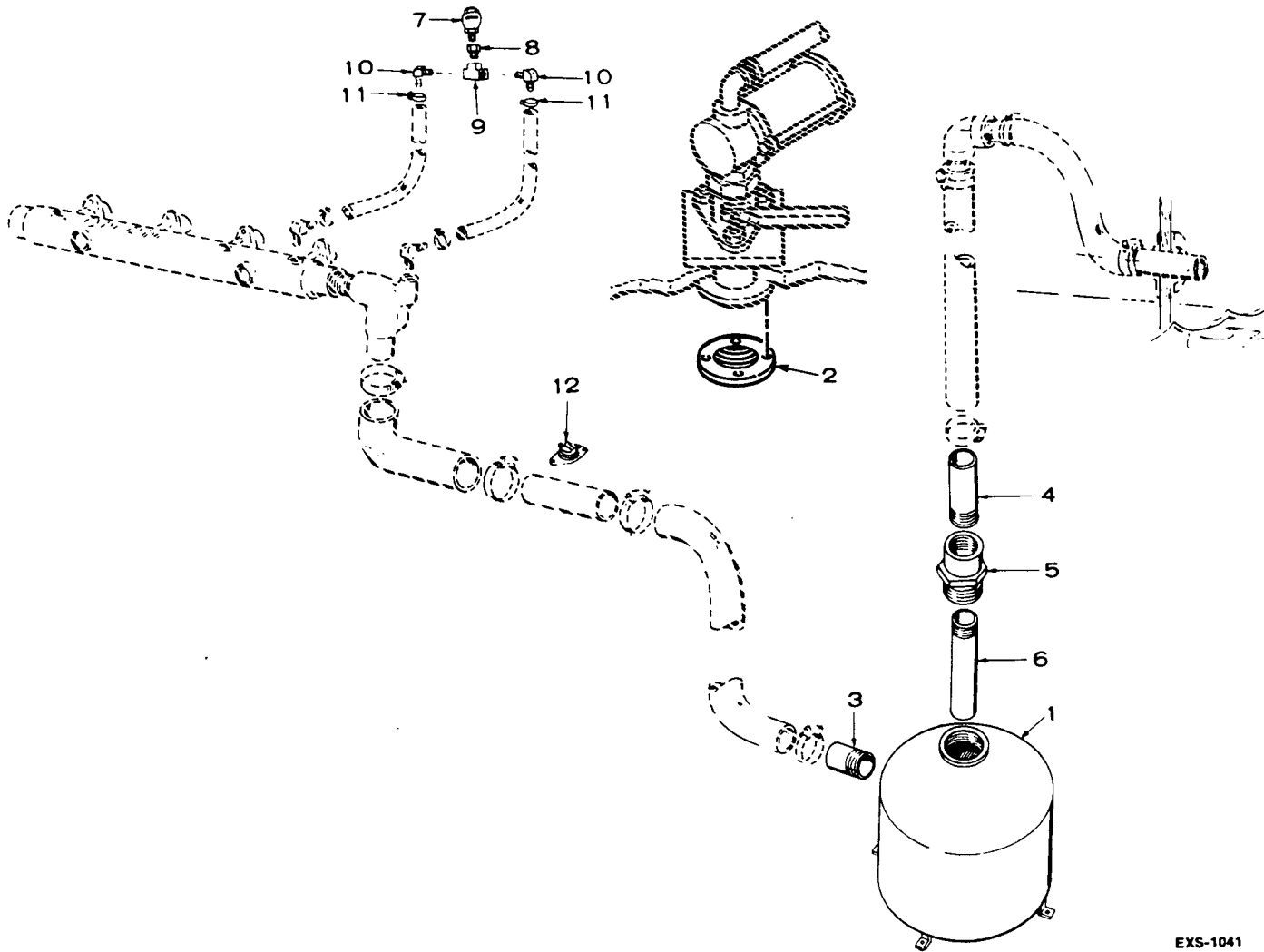
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	193-0104	1	Sender, Water Temperature
2	505-0110	2	Plug, Pipe - Square Head (3/8")
3	131-0137	1	Manifold, Water
4	505-0016	1	Bushing, Reducer (3/8 x 1/8)

Low Engine Temperature Thermostat



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0270	1	Thermostat, Low Engine Temperature

Aqualift Exhaust Components



EXS-1041

Aqualift Exhaust Components

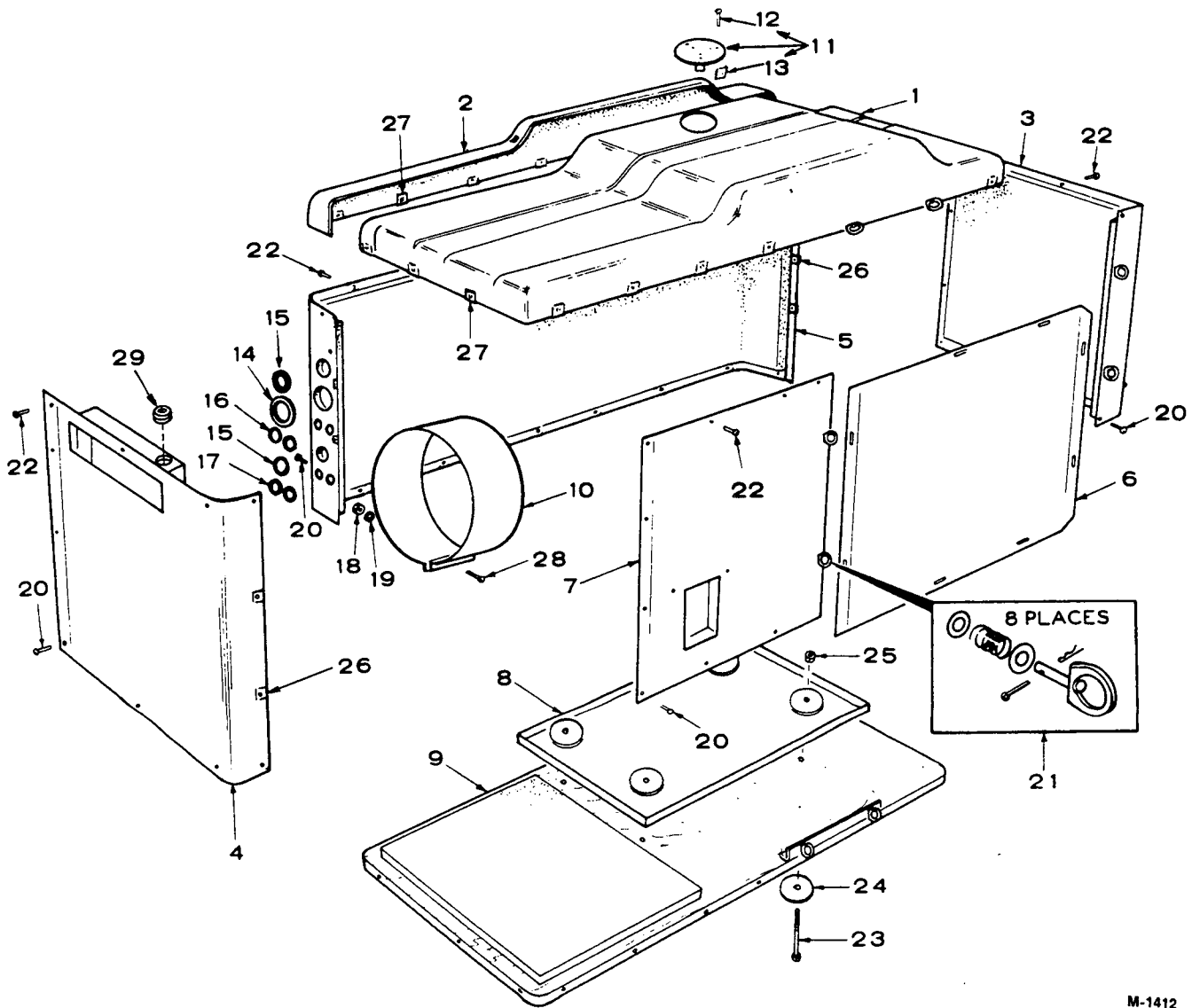
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	155-0954	1	Fitting Package, Muffler Hookup - Includes Parts Marked *	6	505-0631	1	*Nipple, Half - Plastic (1-1/2" x 9-1/4")
	155-0950	1	Relief Valve Kit, Siphon Break - Includes Parts Marked #	7	504-0062	1	#Valve, Vacuum Relief
1	155-1004	1	Muffler Kit, Aqualift - Includes Parts Marked +	8	502-0270	1	#Adapter, Pipe - Brass (1/2" x 3/8")
2	155-1002	1	+Strainer, Hull	9	502-0090	1	#Tee, Pipe - Brass (3/8")
3	155-1122	1	*Inlet, Muffler	10	502-0425	2	#Connector, Hose - Brass (90°)
4	505-0723	1	*Nipple, Half - Pipe - Galvanized (1-1/2" x 3")	11	503-0446	2	Clamp, Hose
5	505-0634	1	*Bushing, Double Tapped (2" x 1-1/2")	12	309-0162	1	Switch, Temperature (Opens at 240° - Closes at 195°)

* - Parts Included in 155-0954 Muffler Fitting Package

- Parts Included in 155-0950 Siphon Break Kit

+ - Part Included in Muffler Kit

Sound Shield Housing



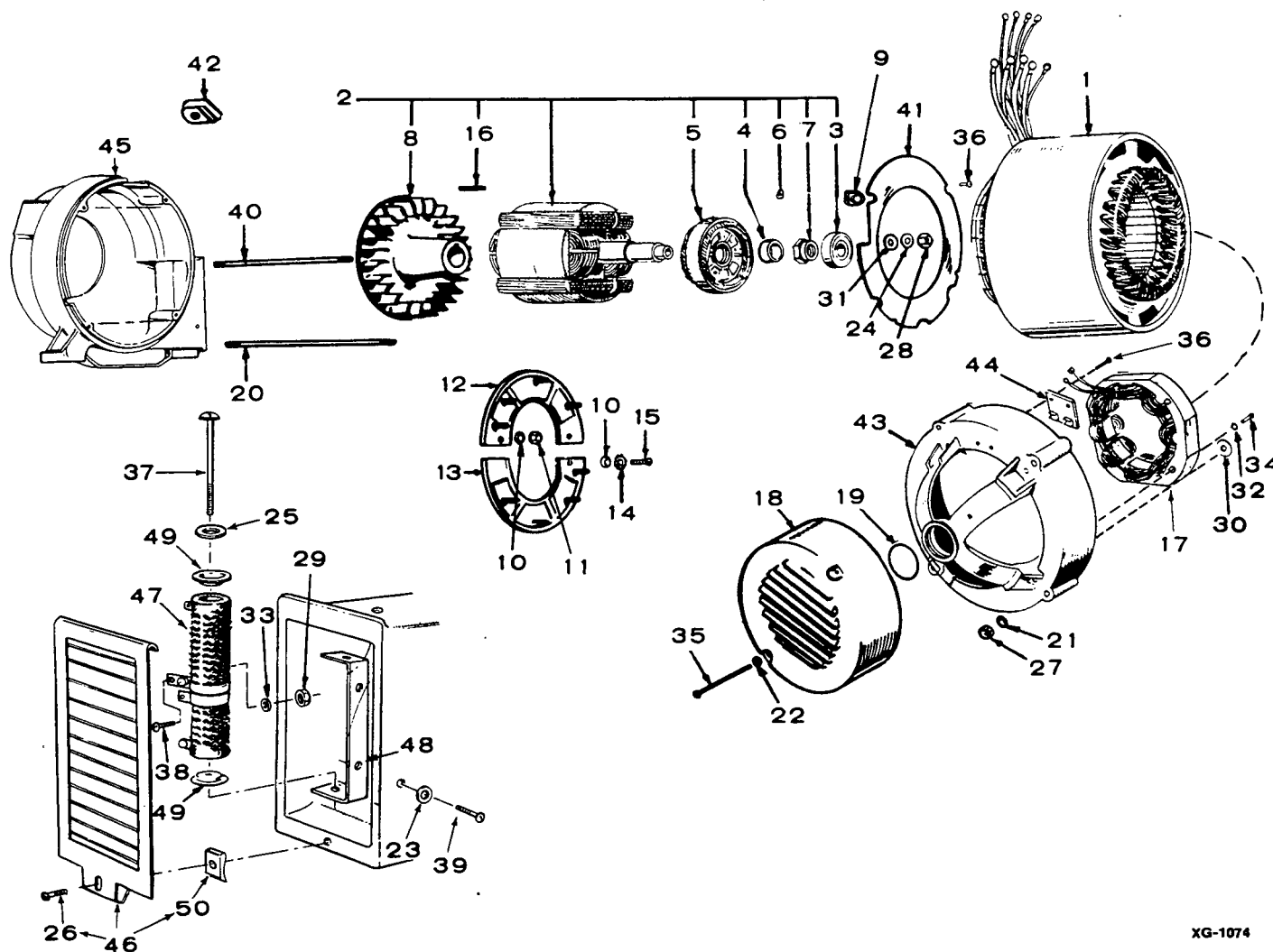
M-1412

Sound Shield Housing

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	405-1524	1	Housing Kit, Sound Shield - Includes All Parts Listed Below Plus Related Air Intake System Parts	12	815-0562	3	*Screw, Round Head
1	405-1523	1	Panel Assembly, Top (Insulated) Includes (2) Folding Handles and (11) Speed Nuts	13	870-0261	3	*Nut, Speed (#8-32)
2	405-1520	1	Molding Assembly, Corner (Insulated) Includes (10) Speed Nuts	14	508-0116	1	Grommet, Rubber (2-3/4" Hole) Exhaust Line
3	405-1515	1	Panel Assembly, Engine End (Insulated) Includes (2) Folding Handles	15	508-0117	2	Grommet, Rubber (1-3/8" Holes) Lead Wires and Water Inlet
4	405-1500	1	Panel Assembly, Generator End (Insulated) Includes (2) Speed Nuts and Grommet	16	508-0071	2	Grommet, Rubber (7/8" Hole) Battery Cables
5	405-1504	1	Panel Assembly, Back (Insulated) Includes (4) Speed Nuts	17	508-0008	2	Grommet, Rubber (13/16" Hole) Fuel Inlet and Return Lines
6	405-1517	1	Panel Assembly, Access (Insulated)	18	870-0053	1	Nut, Hex (#10-32)
7	405-1513	1	Panel Assembly, Door (Insulated) Includes (2) Folding Handles	19	850-0030	1	Washer, Lock - Spring (#10)
8	405-1494	1	Pan, Drip	20	812-0150	20	Screw, Machine - Round Head (1/4-20 x 5/8") Panels to Base
9	405-1502	1	Base, Mounting (Insulated)	21	406-0343	8	Handle, Folding
10	405-1536	1	Band, Air Duct Adapter	22	808-0053	27	Screw, Round Head - Sheet Metal (#14 x 3/4")
11	405-1478	1	Cover Assembly, Access (Includes Parts Marked *)	23	800-0084	4	Screw, Cap - Hex Head (7/16-14 x 4-1/2")
				24	526-0195	4	Washer, Flat (29/64" ID x 3-1/4" OD x 1/8" Thk)
				25	862-0004	4	Nut, Hex (7/16-14)
				26	870-0107	6	Nut, Speed - Type J
				27	870-0197	21	Nut, Speed - Type J
				28	813-0105	1	Screw, Machine - Round Head (#10-32 x 1")
				29	508-0115	1	Grommet, Rubber (2-1/2" Hole) Intake Tube

* - Parts Included in 405-1478 Access Cover Assembly

Generator (Begin Spec AA)



XG-1074

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	STATOR, GENERATOR			220-2199	1	12 kW, 120/240 Volt, 60 Hertz 1 Phase	
	220-2025	1	10 kW, 120/240 Volt, 50 Hertz 1 Phase	220-2149	1	12 kW, † Volt, 60 Hertz 3 Phase	
	220-2050	1	10 kW, † Volt, 50 Hertz 3 Phase	220-2208	1	12 kW, 120/240 Volt, 50 Hertz 1 Phase	
	220-2017	1	12 kW, 120/240 Volt, 60 Hertz 1 Phase	220-2158	1	12 kW, † Volt, 50 Hertz 3 Phase	
	220-2042	1	12 kW, † Volt, 60 Hertz 3 Phase	220-2200	1	15 kW, 120/240 Volt, 60 Hertz 1 Phase	
	220-2026	1	12 kW, 120/240 Volt, 50 Hertz 1 Phase	220-2150	1	15 kW, † Volt, 60 Hertz 3 Phase	
	220-2051	1	12 kW, † Volt, 50 Hertz 3 Phase			32 Volt DC	
	220-2018	1	15 kW, 120/240 Volt, 60 Hertz 1 Phase	220-2232	1	10 kW, 120/240 Volt, 50 Hertz 1 Phase	
	220-2043	1	15 kW, † Volt, 60 Hertz 3 Phase	220-2182	1	10 kW, † Volt, 50 Hertz 3 Phase	
			24 Volt DC	220-2224	1	12 kW, 120/240 Volt, 60 Hertz 1 Phase	
	220-2207	1	10 kW, 120/240 Volt, 50 Hertz 1 Phase	220-2174	1	12 kW, † Volt, 60 Hertz 3 Phase	
	220-2157	1	10 kW, † Volt, 50 Hertz 3 Phase	220-2233	1	12 kW, 120/240 Volt, 50 Hertz 1 Phase	

Generator (Begin Spec AA)

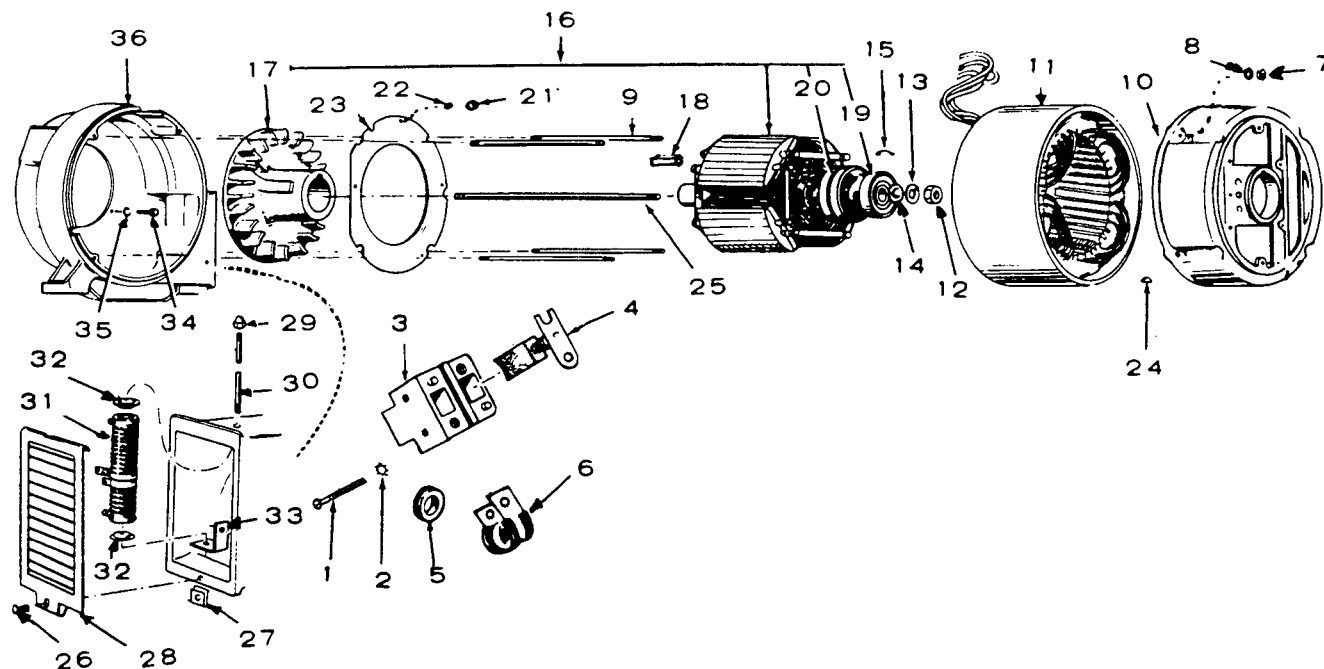
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	220-2183	1	12 kW, † Volt,	32	WASHER, LOCK		
			50 Hertz 3 Phase	853-0013	2		ET (Exciter Stator Edge
	220-2225	1	15 kW, 120/240 Volt,				Mounting) Spec AA through
			60 Hertz 1 Phase				Portion of Spec AD)
	220-2175	1	15 kW, † Volt,	850-0040	4		Spring (Exciter Stator through
			60 Hertz 3 Phase				Mounting) Use Began During
2	ROTOR ASSEMBLY, GENERATOR (Includes Parts						Spec AD
	Marked*)			33	856-0003	1	Washer, Lock (#10 EIT)
	201-2157	1	10.0 MDJC				Resistor Tap
			12.0 MDJC	34	SCREW		
	201-2158	1	50 Hertz	800-0004	2		Cap - Hex Head (1/4 - 20 x 5/8")
	201-2157	1	60 Hertz				(Exciter Stator Edge
	201-2158	1	15.0 MDJC				Mounting) Spec AA through
3	510-0112	1	*Bearing, Rotor				Portion of Spec AD
4	232-2398	1	*Spacer, Bearing	802-0038	4		Socket Head (1/4 - 20 x 1-1/2")
5	201-2151	1	*Rotor, Exciter				(Exciter Stator through
6	515-0094	1	*Key, Exciter Rotor				Mounting) Use Began During
7	870-0284	1	*Nut, Exciter Rotor Locking				Spec AD
8	205-0105	1	*Fan, Generator	35	SCREW, MACHINE - ROUND HEAD (End Bell Cover		
9	508-0095	1	Grommet, Rubber - Air Baffle		Mounting)		
10	526-0008	12	*Washer, Flat (13/64" ID x	812-0165	2		Sets Without Overspeed Switch
			7/16" OD x 1/32" Thk)				(1/4-20 x 4-1/2")
11	870-0131	8	*Nut, Hex (#10-32)	812-0167	2		Sets With Overspeed Switch
12	358-0069	1	*Rectifier Assembly - Positive				(1/4-20 x 6")
13	358-0070	1	*Rectifier Assembly - Negative	36	815-0194	6	Screw, Hex Head - Thread
14	853-0008	4	*Washer, Shakeproof (#10)				Cutting with ET (#10-32 x
15	813-0100	4	*Screw, Round Head				3/8") Board (2) and Baffle (4)
			(#10-32 x 1/2")				Mounting
16	515-0103	1	*Key, Fan to Rotor	37	812-0169	1	Screw, Machine - Round Head
17	220-2009	1	Stator, Exciter				(1/4-20 x 5-1/2") Resistor
18	COVER, END BELL						Through
	234-0185	1	Sets Without Overspeed Switch	38	811-0098	1	Screw, Machine - Round Head
	234-0498	1	Sets With Overspeed Switch				(Brass) (#10-32 x 3/8")
19	509-0094	1	Seal, Bearing ("O" Ring)				Resistor Tap
20	STUD, GENERATOR THROUGH			39	800-0004	2	Screw, Cap - Hex Head
	520-0797	4	10.0 MDJC				(1/4-20 x 5/8") Resistor
			12.0 MDJC				Bracket
	520-0798	4	50 Hertz	40	STUD, ROTOR THROUGH		
	520-0797	4	60 Hertz	520-0789	1		10.0 MDJC
	520-0798	4	15.0 MDJC				12.0 MDJC
21	850-0050	4	Washer, Lock - Spring (3/8")	520-0790	1		50 Hertz
			Generator Through Stud	520-0789	1		60 Hertz
22	850-0040	2	Washer, Lock - Spring (1/4")	520-0790	1		15.0 MDJC
			End Bell Cover	41	234-0462	1	Baffle, Air
23	850-0040	2	Washer, Lock - Spring (1/4")	42	508-0112	1	Grommet, Rubber - Generator
			Resistor Bracket				Adapter
24	850-0055	1	Washer, Lock - Spring (7/16")	43	211-0237	1	Bell, End
			Rotor Through Stud	44	232-2418	1	Board, Connection
25	853-0013	1	Washer, Lock (1/4" ET)	45	231-0171	1	Adapter, Generator
			Resistor Through Screw	46	234-0494	1	Cover Assembly, Air Outlet
26	809-0046	1	#Screw, Sheet Metal - Round				(Includes Parts Marked #)
			Head (#10 x 3/4")	47	RESISTOR, TAPPED - Adjustable		
27	862-0011	4	Nut, Hex (3/8-16) Generator	304-0500	1		12 Volt DC Sets
			Through Stud	304-0521	1		24 Volt DC Sets
28	870-0203	1	Nut, Hex (Special) Rotor	304-0534	1		32 Volt DC Sets
			through Stud	48	232-2399	1	Bracket, Resistor Mounting
29	871-0010	1	Nut, Hex - Brass (#10-32)	49	304-0652	2	Washer, Centering - Resistor
			Resistor Tap				Mounting
30	526-0260	2	Washer, Flat (Special) Exciter	50	870-0177	1	*Nut, Speed (#10)
			Stator (Used Spec AA				
			through Portion of Spec AD)				
31	232-0200	1	Washer - Cone Shaped				
			(Special) Rotor Through Stud				

* - Parts Included in Generator Rotor Assemblies.

- Parts Included in 234-0494 Cover Assembly.

† - Broad Range Reconnectable Stators: Refer to Connection Diagram Inside Outlet Box Cover.

Generator (Spec A Thru Z)



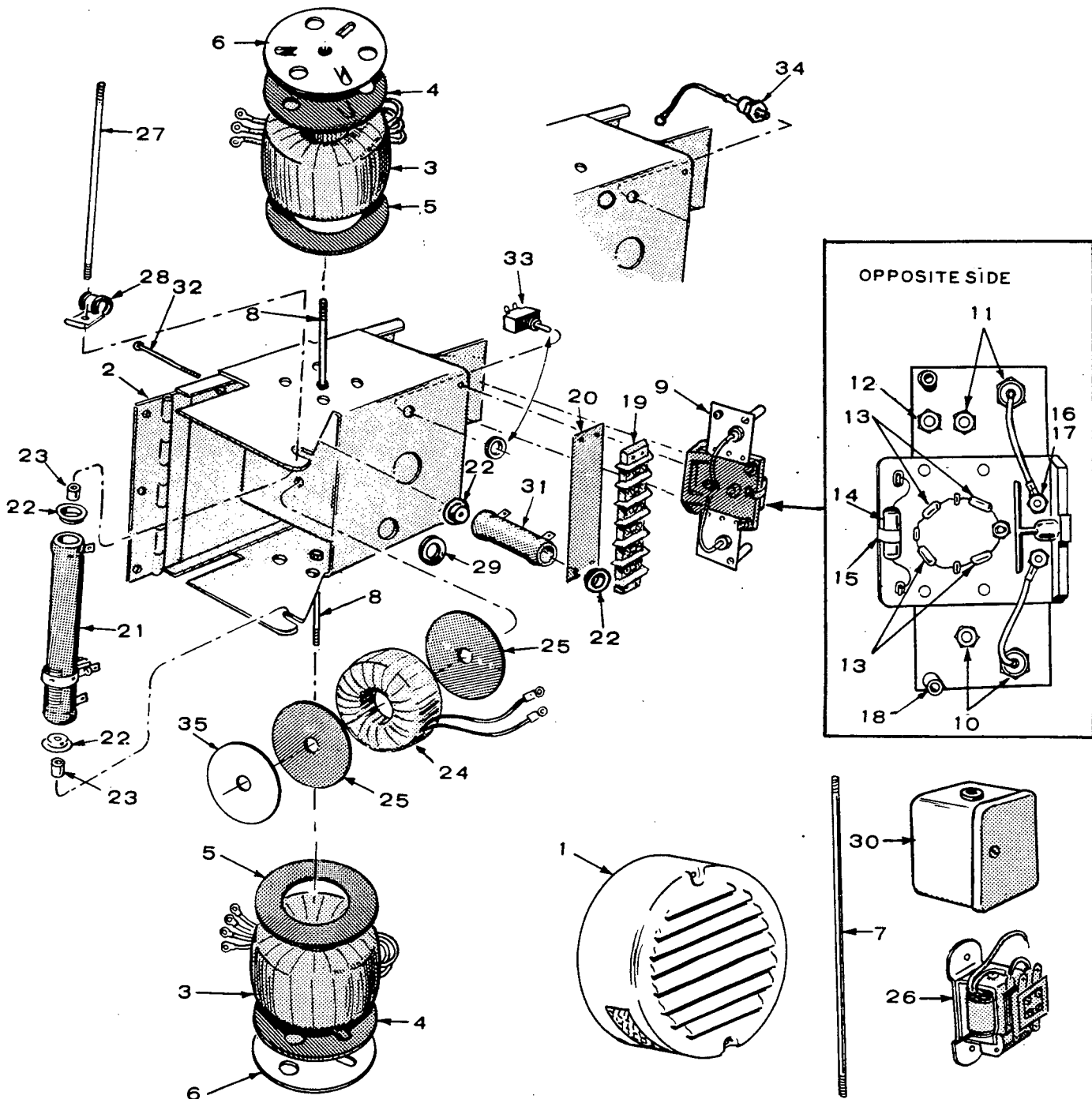
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	812-0086	4	Screw, Machine - Round Head (#8-32 x 1-1/4")	220-0821	1	12 kW, 120/208 Volt, 50 Hertz 3 Phase	
2	856-0002	4	Washer, Lock - External/Internal Tooth (#8)	220-0712	1	12 kW, 120/240 Volt, 50 Hertz 3 Phase	
3	212-1064	2	Block, Brush - Collector Ring	220-0668	1	12 kW, 220/380 Volt, 50 Hertz 3 Phase	
4	214-0059	4	Brush, Collector Ring	220-0601	1	15 kW, 120/240 Volt, 60 Hertz 1 Phase	
5	508-0095	1	Grommet, Rubber (7/16")	220-0595	1	15 kW, 120/208 Volt, 60 Hertz 3 Phase	
6	332-0050	1	Clamp, Loop - Brush Leads	220-0655	1	15 kW, 227/480 Volt, 60 Hertz 3 Phase	
7	862-0015	4	Nut, Hex (5/16-18)	220-0632	1	15 kW, 120/240 Volt, 60 Hertz 3 Phase	
8	850-0045	4	Washer, Lock - Spring (5/16")				
9	STUD. GENERATOR THROUGH						
	520-0639	4	10.0 MDJC				
			12.0 MDJC				
	520-0640	4	50 Hertz				
	520-0639	4	60 Hertz				
	520-0640	4	15.0 MDJC				
10	211-0146	1	Bell. End				
11	STATOR. GENERATOR						
			12 Volt DC				
	220-0792	1	10 kW, 120/240 Volt, 50 Hertz 1 Phase				
	220-0791	1	10 kW, 120/240 Volt, 50 Hertz 3 Phase				
	220-0960	1	10 kW, 220/380 Volt, 50 Hertz 3 Phase				
	220-0870	1	12 kW, 120 Volt, 60 Hertz 1 Phase				
	220-0600	1	12 kW, 120/240 Volt, 60 Hertz 1 Phase				
	220-0602	1	12 kW, 120/208 Volt, 60 Hertz 3 Phase				
	220-0652	1	12 kW, 120/240 Volt, 60 Hertz 3 Phase				
	220-0895	1	12 kW, 127/220 Volt, 60 Hertz 3 Phase				
	220-0667	1	12 kW, 120/240 Volt, 50 Hertz 1 Phase				
			24 Volt DC				
			10 kW, 120/240 Volt, 50 Hertz, 1 Phase				
			10 kW, 120/208 Volt, 50 Hertz 3 Phase				
			10 kW, 120/240 Volt, 50 Hertz 3 Phase				
			12 kW, 120/240 Volt, 60 Hertz 1 Phase				
			12 kW, 120/240 Volt, 50 Hertz 1 Phase				
			15 kW, 120/240 Volt, 60 Hertz 1 Phase				
			32 Volt DC				
			10 kW, 120/240 Volt, 50 Hertz, 1 Phase				
			12 kW, 120/240 Volt, 60 Hertz 1 Phase				
			12 kW, 120/240 Volt, 50 Hertz 1 Phase				
			15 kW, 120/240 Volt, 60 Hertz 1 Phase				
			15 kW, 120/240 Volt, 60 Hertz 3 Phase				

Generator
(Spec A Thru Z)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
12	870-0203	1	Nut, Hex (7/16-20)	26	809-0046	1	Screw, Tapping - Round Head (#10 x 3/4")
13	850-0055	1	Washer, Lock - Spring (7/16")	27	870-0177	1	Nut, Speed (#10)
14	232-0200	1	Washer, Tapered	28	234-0199	1	Grille - Air Outlet
15	232-0596	1	Clip, Retaining - Bearing	29	866-0001	1	Nut, Hex - Acorn (1/4-20)
16	ROTOR ASSEMBLY, GENERATOR (Includes Parts Marked*)			30	520-0620	1	Stud (1/4-20 x 1/4-20 x 6")
			10.0 MDJC	31	RESISTOR		
	201-1122	1	Spec A through N		304-0500	1	12 Volt DC
	201-1124	1	Spec P through Z		304-0521	1	24 Volt DC
	201-1124	1	12.0 MDJC		304-0534	1	32 Volt DC
	201-1122	1	15.0 MDJC	32	304-0006	2	Washer, Dished - Resistor Centering
17	205-0064	1	*Blower, Generator	33	232-1565	1	Bracket, Mounting - Resistor
18	515-0103	1	*Key, Square - Blower to Rotor Shaft	34	SCREW, CAP - HEX HEAD		
19	510-0047	1	*Bearing, Ball		800-0050	2	3/8-16 x 1"
20	204-0061	1	*Collector Ring		800-0051	2	3/8-16 x 1-1/4"
21	813-0098	5	*Screw, Machine - Round Head (#10-32 x 3/8")	35	850-0050	4	Washer, Lock - Spring (3/8")
22	850-0030	5	*Washer, Lock - Spring (#10)	36	ADAPTER, GENERATOR		
23	234-0162	1	*Baffle, Air - Generator				10.0 MDJC 50 Hertz, 12.0 MDJC 60 Hertz
24	516-0138	2	Pin, Alignment		231-0099	1	Spec A
25	STUD, ROTOR THROUGH				231-0112	1	Spec B through Z
	520-0614	1	10.0 MDJC		231-0111	1	12.0 MDJC 50 Hertz, 15.0 MDJC 60 Hertz
			12.0 MDJC				
	520-0615	1	50 Hertz				
	520-0614	1	60 Hertz				
	520-0615	1	15.0 MDJC				

* - Parts included in Generator Rotor Assemblies.

Exciter (Spec A Thru Z)



NOTE: 06SX1N1B used on all 60 hertz Models Spec A, B & C.
 06SX1N1B used on 60 hertz 120/240 volt, 3 phase Models begin Spec D.
 06SX1N3B used on all 60 hertz Models except 120/240 volt, 3 phase Models begin Spec D.
 06SX51N1B used on all 50 hertz Models Spec's A, B & C.
 06SX51N1B used on 50 hertz Models 120/240 volt, 3 phase Models begin Spec D.
 06SX51N3B used on all 50 hertz Models except 120/240 volt, 3 phase Models begin Spec D.

Check unit nameplate for Magneciter number and use correct column.

Exciter (Spec A Thru Z)

REF NO.	PART NUMBER	PART DESCRIPTION	QUANTITY USED										
			A	B	C	D	E	F	G	H	J	K	
		02SX1N1A Use Column A	X										
		04SX1N1A Use Column B		X									
		04SX1N1B Use Column C			X								
		04SX1N3B Use Column D				X							
		06SX1N1A Use Column E					X						
		06SX1N1B Use Column F						X					
		06SX1N3B Use Column G							X				
		06SX51N1A Use Column H								X			
		06SX51N1B Use Column J									X		
		06SX51N3B Use Column K										X	
	209-0001	Exciter, Complete (Less Cover)	1										
	209-0002	Exciter, Complete (Less Cover)		1									
	209-0003	Exciter, Complete (Less Cover)			1								
	209-0005	Exciter, Complete (Less Cover)				1							
	209-0007	Exciter, Complete (Less Cover)					1						
	209-0008	Exciter, Complete (Less Cover)						1					
	209-0010	Exciter, Complete (Less Cover)							1				
	209-0011	Exciter, Complete (Less Cover)								1			
	209-0012	Exciter, Complete (Less Cover)									1		
	209-0013	Exciter, Complete (Less Cover)										1	
1	234-0154	• Cover, Exciter	1	1			1			1			
1	234-0185	• Cover, Exciter			1	1		1	1		1	1	
2	234-0153	Panel Only, Exciter	1	1			1			1			
2	234-0188	Panel Only, Exciter			1	1		1	1		1	1	
3	315-0084	Reactor, Gate	2										
3	315-0099	Reactor, Gate		2	2	2							
3	315-0102	Reactor, Gate					2	2	2				
3	315-0104	Reactor, Gate								2	2	2	
4	232-1553	Gasket, Gate Reactor Mounting - Outer	2	2	2	2		2	2		2	2	
4	232-1608	Gasket, Gate Reactor Mounting - Outer					2			2			
5	232-1551	Gasket, Gate Reactor Mounting - Inner	2	2	2	2	2	2	2	2	2	2	
6	232-1552	Retainer, Gate Reactor	2	2	2	2		2	2		2	2	
6	234-0191	Retainer, Gate Reactor					2			2			
7	520-0211	Stud, Gate Reactor Mounting	1	1			1			1			
8	800-0013	Screw, Cap - Hex Head (1/4-20 x 2-1/2")			2	2							
8	800-0015	Screw, Cap - Hex Head (1/4-20 x 3")						2	2		2	2	
9	305-0259	Rectifier Assembly (Includes Parts Marked †)	1	1	1								
9	305-0387	Rectifier Assembly (Includes Parts Marked Δ)				1							
9	305-0264	Rectifier Assembly (Includes Parts Marked *)					1	1		1	1		
9	305-0388	Rectifier Assembly (Includes Parts Marked £)							1			1	
10	305-0238	†Δ*£ Rectifier Only, Power Field (Negative)	2	2	2	2	2	2	2	2	2	2	
11	305-0239	†Δ*£ Rectifier Only, Power Field (Positive)	2	2	2	2	2	2	2	2	2	2	
12	305-0239	Δ£ Rectifier Only, Field Flash				1			1			1	
13	305-0240	†Δ*£ Rectifier, Voltage Control	4	4	4	4	4	4	4	4	4	4	

Exciter (Spec A Thru Z)

REF NO.	PART NUMBER	PART DESCRIPTION	QUANTITY USED									
			A	B	C	D	E	F	G	H	J	K
14	304-0476	†ΔResistor (500-Ohm, 5 Watt)	1	1	1	1						
14	304-0512	*£Resistor (150-Ohm, 50 Watt)					1	1	1	1	1	1
15	304-0498	†Δ*£Clip, Resistor Mounting	1	1	1	1	1	1	1	1	1	1
16	332-0697	†Δ*£Stud, Terminal (Flat Head)	2	2	2	2	2	2	2	2	2	2
17	332-0698	†Δ*£Stud, Terminal (Extended Slotted Head)	1	1	1	1	1	1	1	1	1	1
18	870-0196	†Δ*£Fastener (Compression Type)	2	2	2	2	2	2	2	2	2	2
19	332-0699	Block, Terminal	1	1			1			1		
19	332-0745	Block, Terminal			1	1		1	1		1	1
20	332-0700	Strip, Block Marker	1									
20	332-0738	Strip, Block Marker		1			1			1		
20	332-0746	Strip, Block Marker			1			1			1	
20	332-0925	Strip, Block Marker				1			1			1
21	304-0489	Resistor, Fixed (200-Ohm, 50 Watt)	1									
21	304-0511	Resistor, Tapped - 500-Ohm (425 Fixed, 75 Adj.)		1			1			1		
21	304-0527	Resistor, Tapped - 500-Ohm (425 Fixed, 75 Adj.)			1	1		1	1		1	1
22	304-0015	Washer, Centering - Resistor	2	4	4	4	4	4	4	4	4	4
23	232-1473	Spacer, Resistor Mounting	2									
23	232-1550	Spacer, Resistor Mounting		2			2			2		
23	232-1474	Spacer, Resistor Mounting			2	2		2	2		2	2
24	315-0085	Reactor, Voltage Control	1									
24	315-0100	Reactor, Voltage Control		1	1	1	1	1	1			
24	315-0105	Reactor, Voltage Control								1	1	1
25	232-1548	Gasket, Voltage Control Reactor	2	2	2	2	2	2	2	2	2	2
26	307-0584	Relay, Field Build-Up	1									
27	520-0641	Stud, Tapped Resistor Mounting	1		1	1		1	1		1	1
27	812-0116	Screw, Tapped Resistor Mounting (RHMS #10-24 x 4-1/2")		1			1			1		
28	332-0050	Clip, Loop	1	1			1			1		
28	332-0052	Clip, Loop			1	1		1	1		1	1
29	508-0008	Grommet, Rubber (For 7/8" Hole)	1	1	1	1	1	1	1	1	1	1
30	307-0643	Cover, Field Relay	1									
31	304-0510	Resistor, Fixed (250-Ohm, 25 Watt)		1	1	1	1	1	1	1	1	1
32	813-0112	Screw, Fixed Resistor Mounting (RHSMS #10-32 x 2-1/2")		1	1	1	1	1	1	1	1	1
33	308-0175	Switch, Residual Reset			1			1			1	
34	305-0238	Rectifier, Power Field - Negative				1			1			1
35	526-0173	Washer, Retainer - Voltage Control Reactor	1	1	1	1	1	1	1	1	1	1
ASSOCIATED HARDWARE (NOT ILLUSTRATED)												
		SCREW, MACHINE - ROUND HEAD										
	812-0156	1/4-20 x 1-1/2"										
	813-0101	#10-32 x 9/16"										
	811-0098	#10-32 x 3/8" (Brass)										
	813-0098	#10-32 x 3/8"										
	815-0190	#8-32 x 3/8"										
	815-0198	#8-32 x 5/8"										
	815-0001	Screw, Machine - Binder Head (Brass) (#6-32 x 1/4")										

Exciter (Spec A Thru Z)

REF NO.	PART NUMBER	PART DESCRIPTION	QUANTITY USED										
			A	B	C	D	E	F	G	H	J	K	
		WASHER, FLAT											
	526-0003	11/64" ID x 3/8" OD x 1/32" Thk						As Required					
	526-0048	.172" ID x 3/8" OD x 1/32" Thk						As Required					
	526-0049	.200" ID x 7/16" OD x 1/32" Thk						As Required					
	526-0179	7/32" ID x 5/8" OD x 1/16" Thk						As Required					
		WASHER, LOCK - SPRING											
	850-0030	#10						As Required					
	850-0040	1/4"						As Required					
	853-0005	Washer, Lock - ET						As Required					
		WASHER, LOCK - IT											
	854-0007	#8						As Required					
	854-0010	#10						As Required					
	854-0014	1/4"						As Required					
		NUT, HEX											
	860-0008	#8-32						As Required					
	860-0011	#10-24						As Required					
	862-0001	1/4-20						As Required					
	870-0053	#10-32						As Required					
	871-0005	#6-32 (Brass)						As Required					
	871-0007	#8-32 (Brass)						As Required					
	871-0010	#10-32 (Brass)						As Required					
		• - Use 234-0223 cover for housed sets.											
		† - Parts included in 305-0259 Rectifier Assembly.											
		Δ - Parts included in 305-0387 Rectifier Assembly.											
		* - Parts included in 305-0264 Rectifier Assembly.											
		£ - Parts included in 305-0388 Rectifier Assembly.											



Control

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	301-1962	1	Box, Control
2	PANEL, CONTROL		
	301-1961	1	Sets Without Indicator Lamps
	301-2376	1	Sets With 1 or 2 Indicator Lamps
	301-3567	1	Sets With 3 Indicator Lamps
3	301-3683	1	Saddle, Control Box - Begin Spec AA
4	508-0015	4	Washer, Fiber
5	RESISTOR		
			Start Disconnect and Fuel
			Solenoid Relay
	304-0032	1	12 Volt DC Sets (15 Ohm, 10 Watt) Fixed
	304-0194	1	24 Volt DC Sets (50 Ohm, 25 Watt) Adjustable
			32 Volt DC Sets
	304-0005	1	Spec A through Z (150 Ohm, 25 Watt) Adjustable
	304-0247	1	Begin Spec AA (100 Ohm, 10 Watt) Adjustable
			Low Oil Pressure
	304-0217	1	12 Volt DC Sets (1 Ohm, 10 Watt) Fixed
	304-0268	1	24 Volt DC Sets (5 Ohm, 50 Watt) Adjustable
	304-0003	1	32 Volt DC Sets (5 Ohm, 50 Watt) Fixed
	353-0007	1	Start Solenoid - 24 and 32 Volt DC Sets (5.5 Ohm, 50 Watt) Fixed
	304-0276	1	Start Disconnect and Fuel Solenoid Relay to Start Relay 24 and 32 Volt DC Sets (75 Ohm, 10 Watt) Fixed
	304-0520	1	Overspeed Switch - Begin Spec AA (90 Ohm, 10 Watt) Fixed
6	307-0623	1	Relay, Start Disconnect
7	RELAY, SOLENOID		
			Start
			12 Volt DC Sets
	307-1046	1	Spec A through Z
	307-0845	1	Begin Spec AA
			24 and 32 Volt DC Sets
	307-0061	1	Spec A through Z
	307-0875	1	Begin Spec AA
			Manifold Heater
	307-1046	1	12 Volt DC Sets
	307-0061	1	24 and 32 Volt DC Sets
8	332-0602	1	Jumper - Heater Solenoid to Start Solenoid
9	308-0154	1	Switch, Start/Stop
10	308-0037	1	Switch, Manifold Heater
11	302-1366	1	Ammeter Kit, Charge - Includes Mounting Hardware (5-0-5)
12	RECTIFIER KIT		
	305-0673	1	12 Volt DC Sets
			24 and 32 Volt DC Sets
	305-0238	1	Spec A through Z
	358-0096	1	Begin Spec AA
13	305-0254	1	Bracket, Rectifier Mounting
14	337-0036	1	Strap, Ground - Control Box
15	402-0078	4	Mount, Rubber - Control Box
16	332-0604	1	Block, Terminal (5 Place)
17	332-0616	1	Strip, Marker (5 Place)
18	332-0706	1	Block, Terminal (8 Place)
19	332-0739	1	Strip, Marker (8 Place)
20	320-0104	1	Limiter, Cranking - Low Oil Pressure

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
21	REGULATOR, VOLTAGE (See Separate Group for Components)		
	305-0589	1	Spec AA through AC
	305-0689	1	*Begin Spec AD
22	815-0350	8	Screw, Hex Washer Head - Tapping (#10-32 x 3/8")
23	COVER		
	301-1963	1	Control Box - Spec A through Z
	301-3714	1	Voltage Regulator - Begin Spec AA
24	BOX, OUTPUT		
	301-1978	1	Spec A and B
	301-2467	1	Spec C Through Portion of Spec AB (Measures 6" x 3" x 4")
			Use Began During Spec AB
	301-5990	1	Measures 8-7/8" x 2-7/8" x 4-1/8"
	301-7535	1	Measures 11-3/4" x 2-13/16" x 5-1/4"
25	COVER, OUTPUT BOX		
	301-0856	1	Spec A and B
	301-2466	1	Spec C Through Portion of Spec AB (Measures 6" x 4")
			Use Began During Spec AB
	301-5992	1	Measures 8-7/8" x 4-1/4"
	301-7533	1	Measures 11-3/4" x 5-1/4"
26	GROMMET, RUBBER		
	508-0001	1	Control Box (1-1/6" Hole) Output Box
			Side (1-3/8" Hole)
	508-0117	1	Rear (1-3/4" Hole)
	508-0183	1	
27	800-0024	4	Screw, Cap - Hex Head (5/16-18 x 1/2")
28	850-0045	4	Washer, Lock - Spring (5/16")
29	526-0115	4	Washer, Flat (11/32" ID x 11/16" OD x 1/16" Thk)
30	815-0236	4	Screw, Self Tapping - Hex Head (5/16-18 x 5/8")
31	856-0008	4	Washer, Lock - EIT (5/16")
32	307-0655	1	Relay, Latching - Sets With Overspeed Switch
33	332-0747	1	Block, Terminal (2 Place) Use Began During Spec AB (Not Used on 3 Phase Sets)
34	332-1043	1	Jumper, Terminal Block (Not Used When Pre-Heat Circuit in Automatic or Load Transfer is Used)
35	332-0052	1	Clip, Wire
36	332-0748	1	Strip, Marker (2 Place) Use Began During Spec AB (Not Used on 3 Phase Sets)
37	321-0175	1	Holder, Fuse - Use Began During Spec AA
38	321-0146	1	Fuse (10 Amps) - Use Began During Spec AA
39	800-0703	1	Stud, Grounding (Special) Use Began During Spec AB
40	337-0089	1	Jumper - Manifold Heater Solenoid Relay (24 and 32 Volt DC Sets)
41	322-0069	As Req	Holder, Indicator Lamp - Sets With Indicator Lamp
42	322-0004	As Req	Lamp, Indicator - Sets With Indicator Lamp
43	856-0006	1	Washer, Lock - EIT (1/4") Use Began During Spec AB

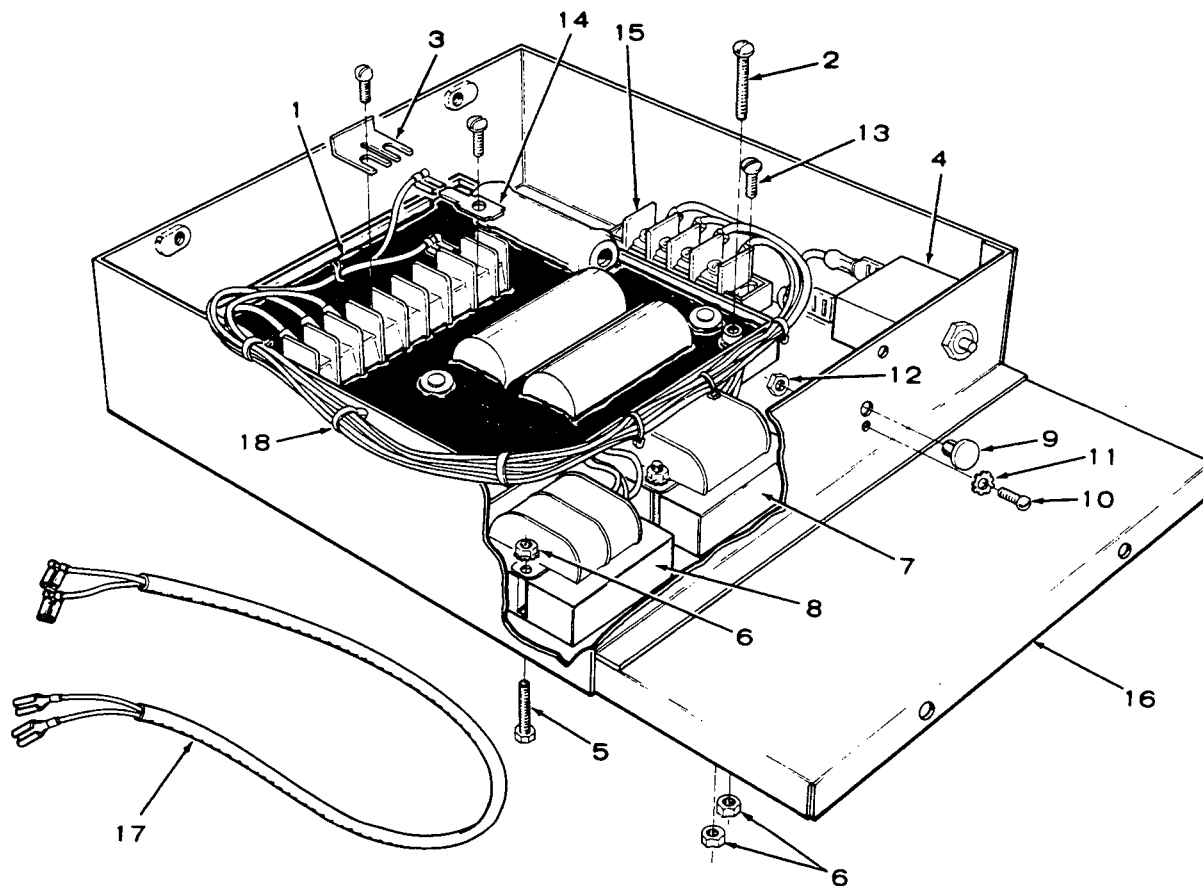
Control

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
44	526-0018	4	Washer, Flat (17/64" ID x 5/8" OD x 1/16" Thk) Use Began During Spec AB
45	862-0013	2	Nut, Hex (1/4-20) Use Began During Spec AB
46	307-0597	1	Relay, Start - Spec A through Z
47	301-2468	1	Bracket, Output Box Mounting - Spec C through Z
48	301-1968	1	Bracket, Control Box Mounting - Spec C through Z
49	301-2208	1	Bracket Control Box Mounting (Left Hand) Spec A and B
50	301-1980	1	Bracket Control Box Mounting (Right Hand) Spec A and B
51	332-0750	1	Marker Kit, Polarity (Early Models)
52	517-0012	1	Button, Dot (5/8" Hole) Sets With Low Oil Pressure Switch

*- Listed below are the models and serial numbers of specific generator sets in Spec AD which were manufactured using the 305-0589 (Non-Adjustable) Voltage Regulator Assembly. This assembly uses the 300-1540 printed Voltage Regulator board. For the remaining component parts refer to the voltage regulator group for Spec AA through AC.

10.0MDJC-53CR/2268AD	H820630574
10.0MDJC-53CR/2268AD	H820630575
10.0MDJC-53CR/2268AD	H820630576
10.0MDJC-53CR/2268AD	H820630577
12.0MDJC-3CR/2268AD	H820630578
12.0MDJC-3CR/2268AD	H820630579
12.0MDJC-3CR/2268AD	H820630580
12.0MDJC-3CR/2268AD	H820630584
12.0MDJC-3CR/2268AD	H820630585
12.0MDJC-3CR/2268AD	I820632353
12.0MDJC-3CR/2268AD	I820633889

Voltage Regulator (Begin Spec AD)



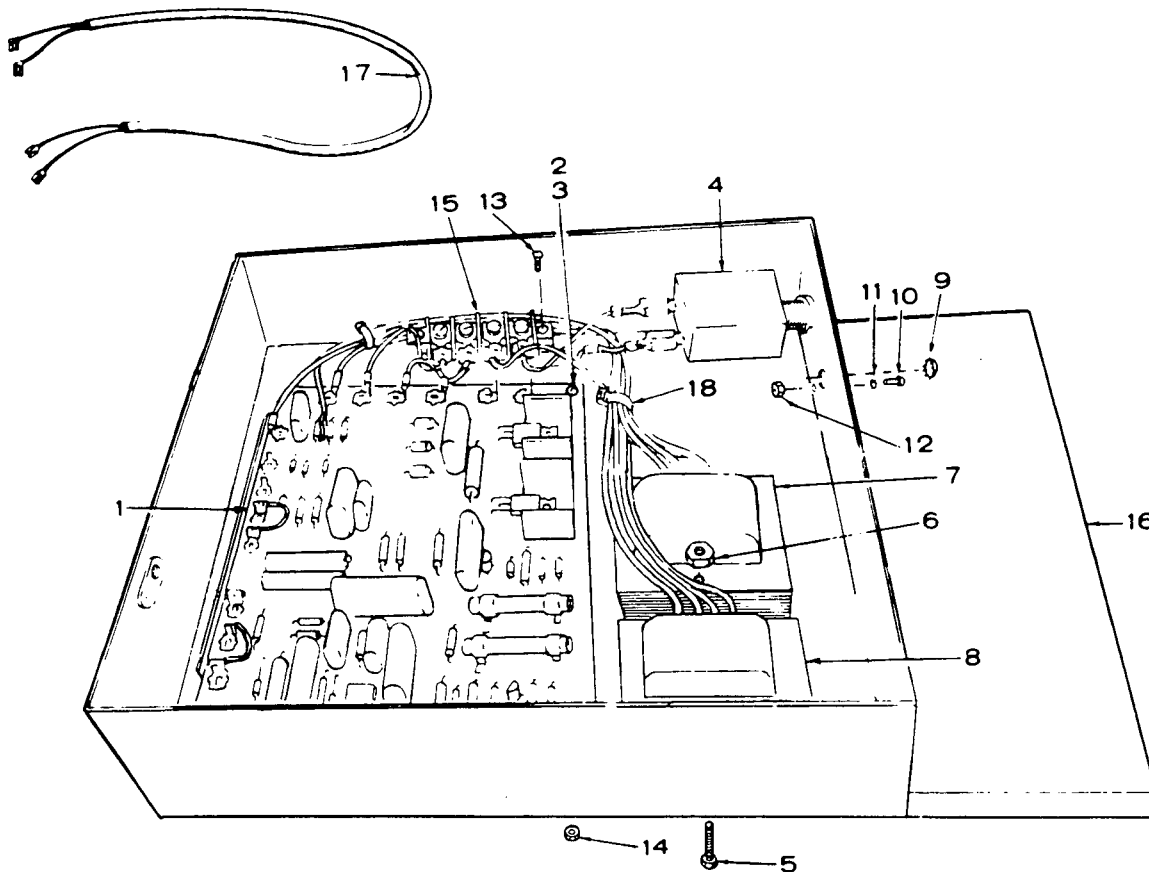
XSC-1342

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	REGULATOR ASSEMBLY, VOLTAGE		
	305-0689	1	Without Voltage Adjustment (Includes Parts Marked *)
1	305-0688	1	*Regulator, Voltage
2	812-0071	4	*Screw, Machine - Round Head (#6-32 x 1-1/2")
3	JUMPER, TERMINAL		
	332-2605	2	Without Voltage Adjustment
	332-2605	1	* 50 Hertz
	332-2605	1	* 60 Hertz
4	320-1121	1	*Breaker, Circuit
5	812-0070	4	*Screw, Machine - Round Head (#6-32 x 1-1/4")
6	870-0183	10	*Nut, Hex - ET (#6-32)
7	315-0391	1	*Reactor
8	315-0386	1	*Transformer, Voltage
9	517-0045	1	*Plug, Dot Button
10	812-0027	1	*Screw, Machine - Round Head (#4-40 x 1/4")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
11	853-0001	1	*Washer, Lock - ET (#4)
12	860-0003	1	*Nut, Hex (#4-40)
13	812-0063	2	*Screw, Machine - Round Head (#6-32 x 1/2")
14	TERMINAL, TAB		
	332-2617	2	*Without Voltage Adjustment
15	332-1647	1	*Block, Terminal
16	301-3713	1	*Panel, Mounting
17	HARNESS, WIRING - Voltage Regulator to Exciter Stator		
	338-0744	1	Sets Without Overspeed Switch
	338-0917	1	Sets With Overspeed Switch
18	332-0942	10	*Tie, Cable

* - Parts Included in 305-0689 Voltage Regulator Assembly Without Adjustment

Voltage Regulator (Spec AA Thru AZ)



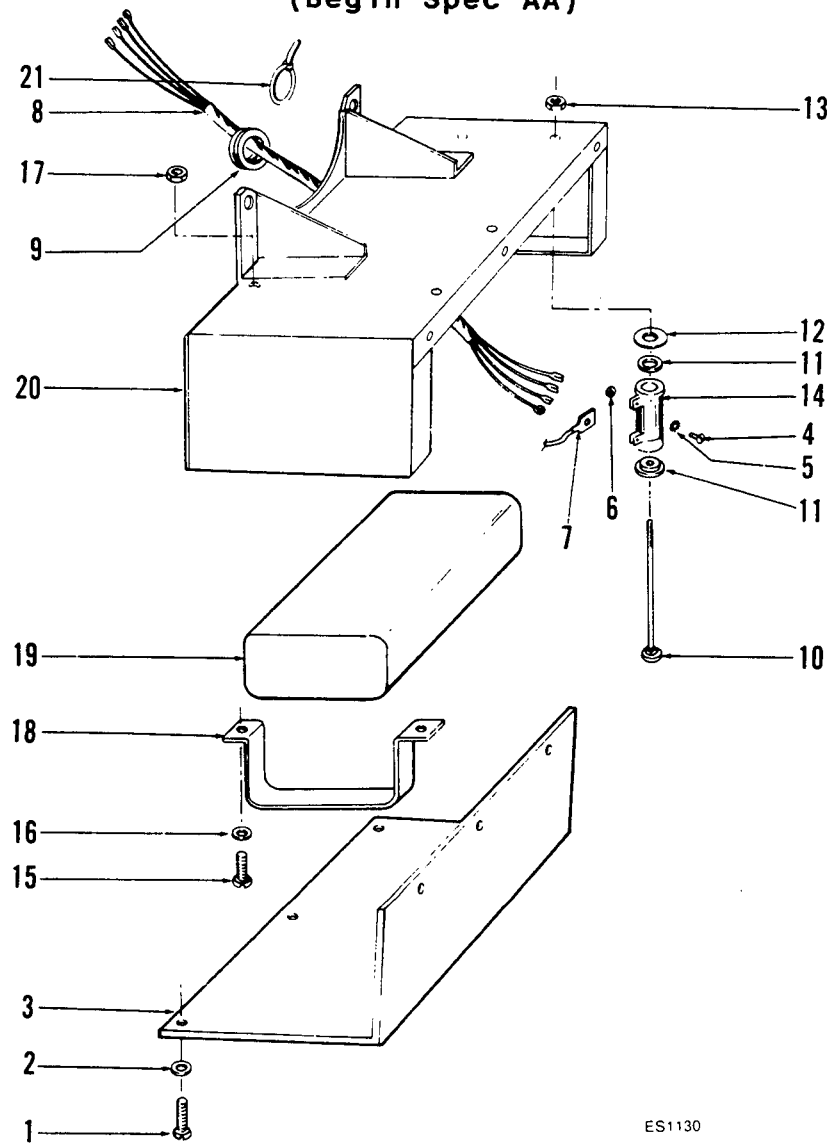
SC-1222

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	REGULATOR, VOLTAGE		
	305-0589	1	Without Voltage Adjustment (Includes Parts Marked *)
1	300-1540	1	*Board, Voltage Regulator - Begin Spec AB through Spec AC (Replaces 300-1006 Board Used Begin Spec AA through Serial Number F760142041 During Spec AA and 300-1404 Board Begin Serial Number F760142042 During Spec AA Until Spec AB)
2	815-0190	4	*Screw, Tapping - Round Head (#8-32 x 3/8")
3	853-0005	4	*Washer, Lock - ET (#8)
4	320-0505	1	*Breaker, Circuit
5	812-0070	4	*Screw, Machine - Round Head (#6-32 x 1-1/4")
6	870-0183	4	*Nut, Hex - With ET (#6-32)
7	315-0391	1	*Reactor
8	315-0386	1	*Transformer, Voltage

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
9	517-0045	1	*Plug, Dot Button
10	812-0027	1	*Screw, Machine - Round Head (#4-40 x 1/4")
11	853-0001	1	*Washer, Lock - ET (#4)
12	860-0003	1	*Nut, Hex (#4-40)
13	812-0063	2	*Screw, Machine - Round Head (#6-32 x 1/2")
14	870-0183	2	*Nut, Hex - With ET (#6-32)
15	332-1647	1	*Block, Terminal
16	301-3713	1	*Panel, Mounting
17	HARNESS, WIRING - Voltage Regulator to Exciter Stator		
	338-0744	1	Sets Without Overspeed Switch
	338-0917	1	Sets With Overspeed Switch
18	332-0942	8	*Tie, Cable

* - Parts Included in 305-0589 Voltage Regulator Without Adjustment.

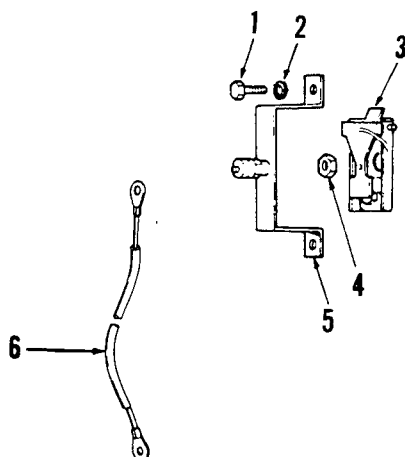
Voltage Regulator Filter (Begin Spec AA)



ES1130

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	813-0098	6	Screw, Machine - Round Head (#10-32 x 3/8")	12	304-0292	2	Insulator, Resistor
2	850-0030	6	Washer, Lock - Spring (#10)	13	870-0053	2	Nut, Hex (#10-32)
3	232-2463	1	Cover, Housing	14	304-0120	2	Resistor, Fixed (2 Ohm, 25 Watt)
4	815-0001	4	Screw, Machine - Binding Head Brass (#6-32 x 1/4")	15	812-0079	4	Screw, Machine - Round Head (#8-32 x 1 2")
5	853-0003	4	Washer, Lock - ET (#6)	16	850-0025	4	Washer, Lock - Spring (#8)
6	860-0006	4	Nut, Hex (#6-32)	17	860-0008	4	Nut, Hex (#8-32)
7	332-1279	4	Terminal, Lug	18	312-0198	2	Bracket, Mounting - Capacitor
8	338-1165	1	Harness, Wiring	19	312-0197	1	Capacitor
9	508-0071	1	Grommet, Rubber	20	232-2462	1	Housing, Filter
10	813-0112	2	Screw, Machine - Round Head (#10-32 x 2-1/2")	21	332-0942	2	Tie, Cable
11	304-0015	4	Washer, Centering				

Overspeed Switch



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	800-0003	2	Screw, Cap - Hex Head (1/4-20 x 1/2")
2	850-0040	2	Washer, Lock-Spring (1/4")
3	SWITCH, OVERSPEED		
	150-0956	1	60 Hertz Sets
	150-1661	1	50 Hertz Sets
4	868-0004	1	Nut, Jam - Hex Head (7/16-20)
5	150-1446	1	Bracket and Point Assembly
6	336-9477	1	Lead - Overspeed Switch (Begin Spec AA)

Kits, Labels, Paint

PART NO.	QTY. USED	PART DESCRIPTION
98-1807	1	Label Kit
168-0092	1	Gasket Kit, Engine
525-0216	—	Paint, Touch - Up - White Enamel (13 oz. Pressurized Can)

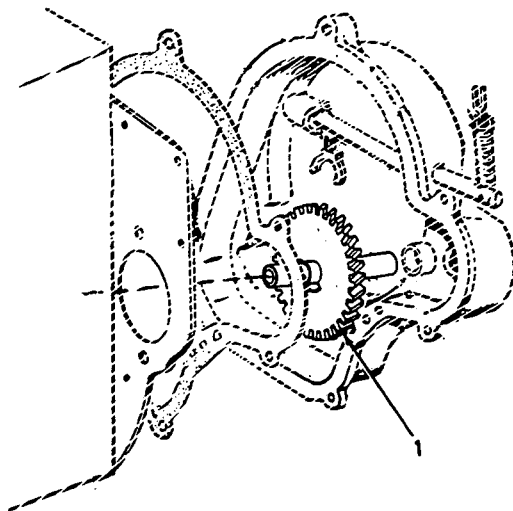
OVERHAUL KITS, ENGINE

522-0205	1	Spec A through C
522-0220	1	Spec D through R Begin Spec S
522-0250	1	Sets Without Heat Exchanger Sets With Heat Exchanger
522-0311	1	Begin Spec S through Serial Number 0675975282 During Spec AA
522-0312	1	Begin Serial Number 0675975283 During Spec AA

NOTE: For other kits refer to the related group.

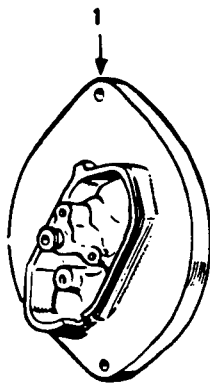
SPECIAL PART SECTION WORKBOAT MODELS

Water Pump Drive Gear Workboat Models



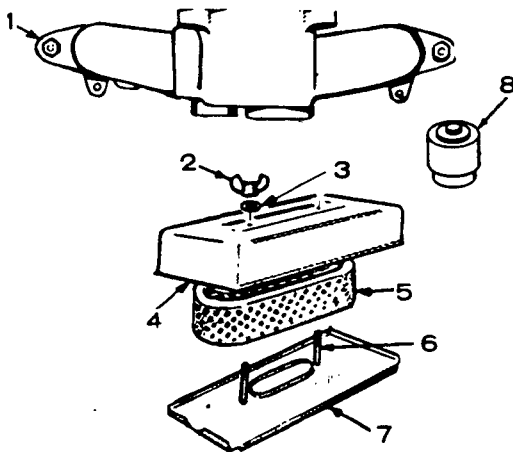
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	191-0552	1	Gear, Drive - Water Pump

Start Disconnect Switch Workboat Models



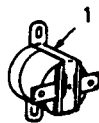
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	131-0142	1	Plate

Air Cleaner & Intake Manifold Workboat Models



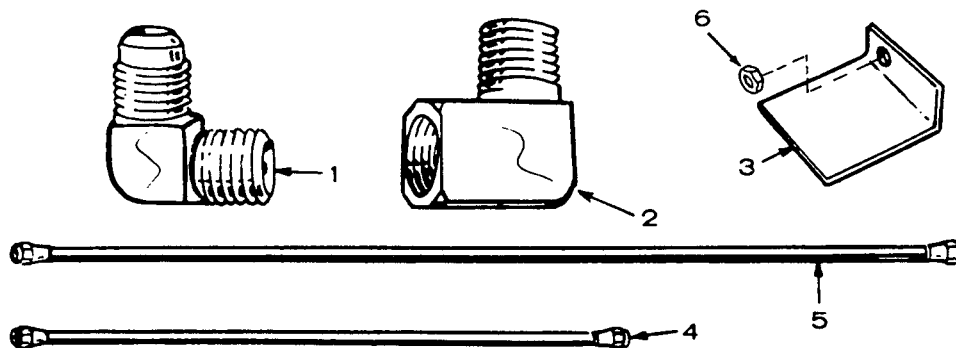
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	154-1378	1	Manifold, Intake
2	865-0020	2	Nut, Wing (1/4-20)
3	140-0602	2	Washer, Air Cleaner
4	COVER, AIR CLEANER		
	140-0594	1	Spec A through S
	140-1194	1	Begin Spec T
5	140-0606	1	Element, Air Cleaner
6	520-0621	2	Stud (1/4-20 x 3")
7	140-0607	1	Pan, Air Cleaner
8	140-0961	1	Indicator, Service (Begin Spec T)

High Temperature Switch Workboat Models



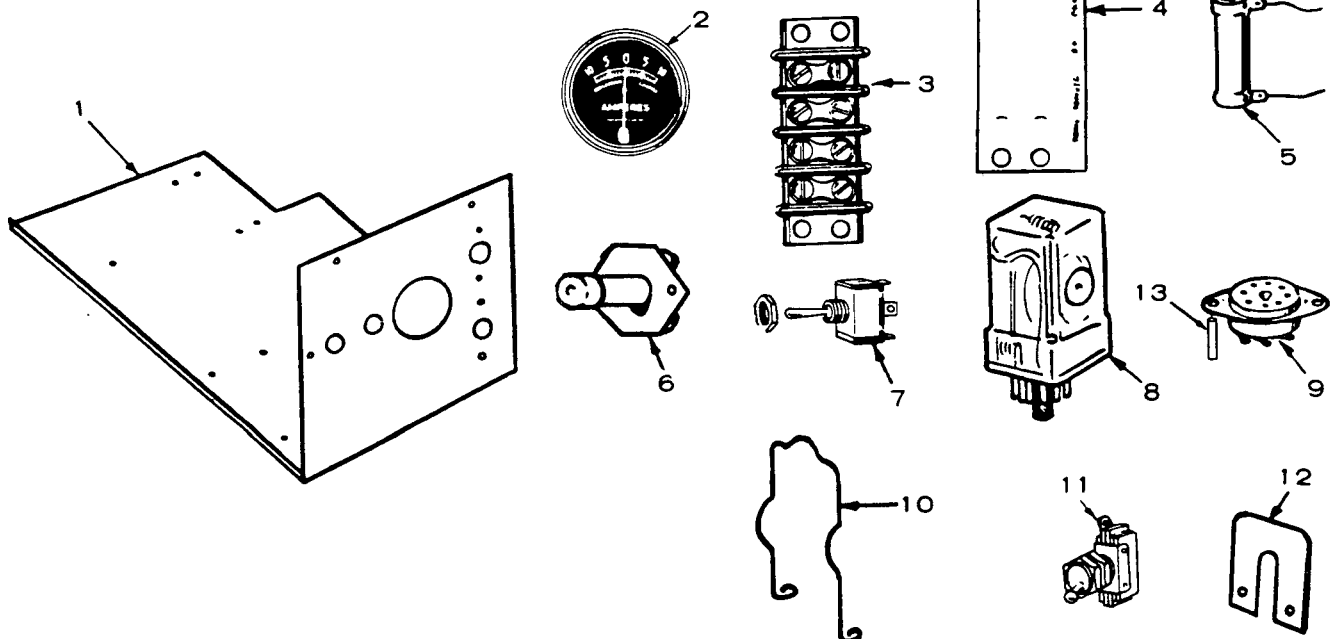
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	309-0191	1	Switch, High Temperature

Fuel Injection Components Workboat Models



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	502-0138	1	Elbow, Male - Spec A through R (Primary Fuel Filter Outlet to Secondary Fuel Filter Line)	3	147-0202	1	Lever, Stop - Injection Pump
2	ELBOW, PIPE 502-0002	1	Fuel Pump Inlet (90°) Fuel Pump Outlet	4	LINE, FUEL (Secondary Filter to Injection Pump)	1	Spec A through R
	502-0020	1	Spec A through R (90°)		501-0097	1	Begin Spec S
	502-0065	1	Begin Spec S (45°)	5	LINE, FUEL (Fuel Pump to Secondary Filter)	1	Spec A through R
					501-0098	1	Begin Spec S
					149-1189	1	Nut, Hex - With ET (#10-32)
				6	870-0131	1	

Control Components Workboat Models



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	301-2409	1	Panel, Control Box	7	308-0155	1	Switch - Alarm Test
2	302-1360	1	Ammeter, Charge (10-0-10)	8	307-0777	1	Relay, Alarm
3	332-0254	1	Block, Terminal (4 Place)	9	323-0052	1	Socket, Alarm Relay
4	332-0868	1	Strip, Marker (4 Place)	10	307-0778	1	Spring, Alarm Relay Holddown
5	304-0330	1	Resistor (20 Ohm, 10 Watt)	11	308-0069	1	Switch, Hi-Lo Charge
6	308-0028	2	Switch - Start (1) Heater (1)	12	332-0439	2	Jumper, Terminal Block
				13	332-0943	2	Spacer, Insulating